



THE FLOWERING PLANTS OF
MADRAS CITY AND ITS
IMMEDIATE NEIGHBOURHOOD

BY
P.V. MAYURANATHAN

REVISED BY
C. LIVINGSTONE and A.N. HENRY



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AND ITS IMMEDIATE NEIGHBOURHOOD

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They also thank the Controller of Examinations, University of Madras, for permitting this work, which is the Ph.D. thesis of Dr. C. Livingstone, to be published.

PREFACE

In a developing country like India, floristic studies are of great national relevance. Plant resources in a tropical climate like ours contribute to the natural wealth of our country; therefore, it is very essential that we record all our plants with their correct identity and their exact distribution for their proper utilization and conservation.

The city of Madras, one of the largest in India, lacks a comprehensive modern flora for the correct determination of all the available taxa. While it should be admitted that Mayuranathan (1929) and Barnes (1938) laid foundation for the floristic work of this area, little progress had been made thereafter. Way back in 1938, Barnes pointed out, "It appears that much still remains to be done before even the flowering plants of the district are completely listed." Furthermore, the Poaceae (Gramineae), one of the economically important and dominant families, have remained neglected till date.

Mayuranathan (1929) noted, "there appears to be a certain amount of change taking place in the flora of this region." Weeds of various kinds, particularly aliens are spreading at an alarming rate across all the available open space, even in the thickly populated areas of the city. While some of these aliens compete with, and try to eliminate the native species, others become a menace to horticulturists or a hazard to the public. Biologists working on such weeds need a local flora by which they can easily determine these taxa and locate them for further study and research.

The population explosion and the consequent growth and development of the metropolis have a very damaging effect on the vegetation, especially through habitat destruction. Many native species recorded by earlier workers as common in this area have now become rare or have disappeared. It is time that we carefully recorded such rare taxa and took measures to protect them.

While the vegetation and flora of the hilly regions, particularly of the Western Ghats, are systematically studied by taxonomists of various organisations, the plants of the plains continue to remain neglected. A flora of the plains, especially of a city like Madras would be directly useful to the students of biology and practical plant users in Madras City and Chengalpattu District.

Madras

July, 1994

C. LIVINGSTONE

A.N. HENRY

FOREWARD

Plants of a region invariably mirror the ancient evolutionary history, ecology and human use or misuse of the resources of that region. The city of Madras and its neighbourhood were once thickly covered with plants of the dry evergreen forest and the coastal areas had even mangrove plants. More than 100,000 years ago, this region had been the habitat of our stone age ancestors. And the stone tools they used for digging some roots and tubers or crushing vegetables and fruits can be collected, even today along the Kortalaiyar river terraces. That dense forests have become a thing of the past today, and hardly 0.1% of this area has vegetation cover, that too in isolated pockets of preserved forests - the Madras Christian College Campus, Guindy National park and Arignar Anna Zoological Park at Vandalur.

Dr. C. Livingstone and Dr. A.N. Henry's revision of the celebrated work of P.V. Mayuranathan's "The Flowering Plants of Madras City and its immediate Neighbourhood" fulfils a long felt need for an accurate description of plants of this region. Mayuranathan's book published in 1929 had described a total of 831 taxa. Mr. E. Barnes, Professor of Chemistry at the Madras Christian College, added another 53 taxa as a supplement in 1938. Since then numerous researchers have studied the plants of this region and have also made collections but all these have remained as inaccessible lists and reports. From the vantage position of the thickly wooded campus of the Madras Christian College, Dr. Livingstone has since made a comprehensive study of the plants of this region after analysing the species for the past 15 years. The present revision combines his own intimate knowledge of plants with the expertise of Dr. Henry who is among the country's foremost taxonomists, who has himself made extensive study of the plants of this region. The current revision adds 155 taxa to Mayuranathan and Barnes's account - 69 species of grasses, 41 cultivated and 45 naturalised plants. It is of significance that 594 plants of the total 1039 are weeds. As a major port of entry and a metropolitan city well connected with other regions, the vegetation appears to be undergoing rapid and dynamic changes. Some 100 plants listed by Mayuranathan could not be traced at all by Livingstone and Henry. Such large scale depletion of plant resources is a matter of great concern to all of us and should therefore prompt every one of us to protect the remaining plant habitats, including the Guindy National Park and the Adayar Estuary for the benefit of the coming generations.

Livingstone and Henry provide adequate information of the region - geography, geology, water bodies, climate and history - so as to relate them to the distribution of plants. Plants occurring in diverse habitats have been described by them accurately besides an account of economically useful plants including those used in indigenous medical practices. The systematic treatment of plants and the scientific names conform to the current state of the art in plant taxonomy and nomenclature.

The Botanical Survey of India is presently engaged in the compilation of details of floras at the National, State and regional level. This revision of Mayuranathan's work is therefore a timely significant addition to the study of the flora of a major Indian City and its neighbourhood at this juncture. Scientists, conservation biologists, planners, students and the general public at large, I am sure, will derive maximum benefit from this valuable source material on plant resources.

My warm appreciation to the authors for their dedication in bringing out this first revision of Mayuranathan's flora in and around the city of Madras, which was a garden city, till about the first quarter of this century.

Madras - 8

July 25th, 1994

M.RAMU

Commissioner of Museums

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INTRODUCTION

THE AREA OF STUDY

The area of study includes the city of Madras and the adjoining parts of Chengalpattu District of Tamil Nadu (formerly Madras State), South India. It is situated in 13°N and 80°E , and the altitude ranges from sea level to about 100 metres. The total area covered is approximately 2,800 sq. km. It is surrounded in the north by the Korttalaiyar (Kosasthalaiyar) river, in the south by the Palar river, in the east by the bay of Bengal and in the west by the Thiruvallur and Kanchipuram Taluks and part of the Sriperumpudur Taluk.

GEOLOGY AND SOIL

The terrain is more or less a flat plain with scattered hillocks, gently sloping towards the bay of Bengal in the east. The rocks are of two kinds, namely, the metamorphic rocks consisting mainly of gneiss and rocks mostly of laterite in various stages of formation. White coloured shales and clays containing plant fossils belonging to the Upper Gondwana system are met with in Sriperumpudur (Sastry et al. 1971). Soils are of four kinds, namely, red loamy soil in the inland, sandy soil along the coastal belt, clayey soil along low-lying areas and lateritic soil in some barren lands.

LAKES, RIVERS, CANALS AND ESTUARIES

Lakes and ponds are in abundance in the area. One of the largest lakes in the state of Tamil Nadu (Sembarambakkam lake) falls within this area. The water of most of the lakes and ponds is used for irrigation. Red Hills and Sholavaram lakes located at the northern part of the area are the chief sources of drinking water to the city of Madras.

The Korttalaiyar river which forms the northern boundary of the area has its origin at the Kaveripakkam tank in North Arcot District. It feeds the Poondi reservoir of Chengalpattu District and then passes through the northern part of Chengalpattu District before entering the sea near Ennur. This river usually remains dry. Occasional floods appear when the northeast monsoon is heavy. The Palar river forms the southern boundary and it originates from the neighbourhood of Nandhi Hills of Karnataka. This also remains almost dry except during northeast monsoon. It enters the sea near Vayalur. The Adayar river passes through Sriperumpudur and Saidapet Taluks of Chengalpattu District and enters the southern part of Madras city. It joins the sea near Adayar. The surplus of Sembarambakkam lake enters the Adayar river during the northeast monsoon. The Coovum river which originates from North Arcot District passes through Thiruvallur, Sriperumpudur and Saidapet taluks before entering Madras City. It passes through the heart of the city, but the water is more or less stagnant, and is highly polluted with the sewage of the city. It joins the sea at the northern end of the Marina Beach.

There are estuaries with backwaters along the coastal areas, especially near Ennur and Kovalam. These estuaries are connected by the Buckingham Canal which runs in a northsouth direction along the coast.

CLIMATE

The climate is typically coastal without extremes. Gaussen et al.(1964) term the climate of Madras as wet tropical moderate bioclimate. " $t > 20^{\circ}\text{C}$, $1,000 < P < 1,500 \text{ mm.}$, 5 or 6 dry months". However, four overlapping seasons may be recognised, namely, southwest monsoon season (June-September), northeast monsoon season (October-November), winter season (December-February) and summer season (March-May).

Rainfall:

The average annual rainfall is about 120cm. Maximum rainfall is received during the north east monsoon (October-November), owing to low pressures developed in the bay of Bengal. Brief spells of heavy rain, often associated with cyclonic storms and consequent floods are not uncommon during this period. The monsoon is sometimes erratic extending into the following winter season. Summer showers are rare. The southwest monsoon spills over the area sometime during June-September. Heavy showers are very rare during this season.

Temperature:

During December-January, the maximum day temperature is about 28°C . It goes up steadily during summer and is as high as $38-40^{\circ}\text{C}$ around April-May. The onset of southwest monsoon brings down the heat of summer.

Relative Humidity:

Relative humidity is about 85% during rainy and cooler months. It is about 58% during hot summer.

The Wind:

The wind speed is 4-6 km per hour during cooler months (December-January). It goes up to 11-13 km per hour by the end of summer (May-June).

HISTORY AND IMPORTANCE OF THE AREA

The discovery of early stone-age tools from Atthirampakkam and several other places near Madras proves that there was human inhabitation in this area as early as the paleolithic age (Raman, 1959). Iron-age graveyards dating back to about the 1st century A.D. are a common sight at Guduwancheri and Vandavur of Chengalpattu District.

Studies on the early history of Tamil Nadu indicate that this area was ruled by the ancient Pallavas from the 6th to 9th century A.D. (Raman, 1959). They used Mahabalipuram as the seaport.

INDIA

MADRAS

BAY OF BENGAL

LEGEND

- CITY BOUNDARY
- ROADS
- RAILWAYS
- RIVERS AND CANALS
- LAKES AND TANKS

SCALE

KILOMETRES



Madras J.

BAY OF BENGAL

13° 0'

REFERENCES

CITY BOUNDARY

ROADS

RAILWAYS

RIVERS AND CANALS

LIKES AND THANKS

SCALE

KILOME

After the Pallava period, Cholas ruled over this area (10th to 14th century A.D.). After the Cholas, this area came under the rule of Vijayanagar Kings (14th to 16th century A.D.). In the 16th century A.D., the Sultanates of the Deccan defeated the Vijayanagar King. The Mughal Empire spread over this area in the 17th century. In the meantime the Portuguese, the Dutch, the French and the British traders started settling around the coastal regions of India. There were competitions and fights between them. In due course, the British emerged victorious and they ruled over the area with Madras as the capital of the then Presidency of Madras.

The Madras City of today had its beginnings on a small strip of no man's land. The New English Factory was founded here in 1640 which later developed into Fort St. George. To the north of this was an ancient fishing hamlet called Madraspatnam. Around Fort St. George, a church and several houses were built for the British settlers. To the northwest of this White Town came up the so-called Black Town which was named Chennapatnam after Chennappa Nayak. The growing Chennapatnam merged with the old Madraspatnam and British called the entire town as Madraspatnam. There were several villages around the Madraspatnam and they were acquired by the British at different times. Triplicane (Thiru-alli-keni) was the first village to be acquired by the British (Nayudu, 1965). Subsequently villages such as Egmore (Ezhumbur), Purasawakkam, Tondiarpet (Thandayarpettai), Thiruvottiur, Nungambakkam, Vyasarpady, Kathivakkam, Vepery, Perambur, Mylapore (Mayilai) and others were also acquired. By the beginning of the 19th century, the city of Madras more or less reached its present shape in extent.

Madras, known by the name Chennai in Tamil, is the capital of Tamil Nadu (formerly Madras State). It is the fourth largest city in India with a total area of about 128 sq. Km. and a population of over 3.27 million. Madras is a comparatively recent city, still retaining the ancient Tamil culture. It has historical sites including magnificent buildings, temples, mosques and tombs. Along the Bay of Bengal in the east, there are wide beaches including the Marina beach, the second longest in the world. Aquaria and Beach Resort Centres exist. In the outskirts of Madras is Mahabalipuram (Mamallapuram), a seaport at one time, where cave temples carved by the Pallava Kings attract a large number of tourists every day.

Madras City has several gardens and parks. One of the well-known gardens is Agri-Horticultural Society Garden at Teynampet established in 1838. Annual flower shows organised in these gardens attract large crowds. The Theosophical Society Campus at Adayar is a vast, quiet campus within the city. One of the oldest Banyan trees of South India is found here which attracts tourists and others. A good number of alien plants are cultivated here.

Madras City is unique in having an extensive natural park (The Guindy National Park) within the city limits. This park retains a scrub jungle where black bucks and spotted deer find their natural home. The Arignar Anna Zoological Park of Vandalur which is in the outskirts of Madras City also falls within the area of the present study.

PAST BOTANICAL WORKS

Studies in past botanical works reveal that James Petiver (1658-1718) and Charles Du Bois (1656-1740) of London were the earliest who influenced plant collections from the Madras Coast (Burkill, 1965). Samuel Brown, a British Surgeon, was one of the first to collect plant specimens from Madras. He collected plants from the vicinity of Fort St. George during 1688-1698 and sent them to London.

Koenig studied the flora of Madras Coast for a short period after 1768. He sent specimens to Banks, Linnaeus and Retzius. Roxburgh came to Madras around 1776 and studied the flora along with Koenig. Robert Wight (1798-1872) collected plants from South India including Madras. He was the first Superintendent of the Botanical Garden (Agri-Horticultural Society Garden). Hooker visited Madras in 1848 and made a few collections. Cleghorn made a lot of collections from 1850 to 1859. He founded a herbarium in Madras Museum around 1853. His specimens along with those of Drew and Elliot formed the nucleus of the Madras Herbarium (MH), now located at Coimbatore (Botanical Survey of India, Southern Circle). Brown, in 1862, published "A Handbook of the Trees, Shrubs and Herbaceous plants growing in the Madras Agri-Horticultural Society's Garden and Neighbourhood of Madras". Brown's book was revised by Wood in 1866 with a supplement. Lawson made some collections between 1883 and 1886. Allan Butterworth, in 1911, published a book entitled "Some Madras Trees". Fyson published a series of papers (1912-1921) on "Madras Flowers". Mayuranathan, in 1929, published an account of "The Flowering Plants of Madras City and its Immediate Neighbourhood". Barnes, in 1938, wrote a supplement to Mayuranathan's Flora. Lal, in 1972, published a list of plants from Madras Christian College Campus, Tambaram. Lourdasamy & Babujee, in 1973, published a list of trees and shrubs in their "Flora of Loyola College, Madras - Part I". Lourdasamy and Kingsley, in 1975, published a list of transitory plants in their "Flora of Loyola College, Madras - Part II". Lal and Livingstone, in 1978, published an account of the Flora of Madras Christian College Campus, Tambaram. Govindarajulu made extensive collections of Cyperaceae members between 1956 and 1980 and published novelties in 1972, 1979 and 1981. Henry and Swaminathan published an account of "Vascular Plants of Vedanthangal Water Birds Sanctuary and Surrounding Regions in Chingleput District, Tamil Nadu" in 1981.

Livingstone, in 1987, produced a thesis on "Studies on the Flora of Madras City and its Environs". Narasimhan produced a thesis on "A Floristic study of the Flowering Plants of Chengalpattu District, Tamil Nadu", in 1991.

PRESENT WORK

The present work aims at updating "The Flowering Plants of Madras City and its Immediate Neighbourhood" by Mayuranathan, published in 1929. Regular field trips were undertaken for the last fifteen years and plant specimens were collected. They were numbered, poisoned, pressed and made into herbarium specimens in the conventional method. Poisoning was done using a saturated solution of mercuric chloride dissolved in 95% ethanol. A total of 1432 field numbers was gathered, which includes 1041 species and infraspecific taxa of vascular plants. These have been deposited at the Madras Christian College Herbarium.

Field data of the plants collected were recorded in the field diary. These data include habit, habitat, height, colour and scent of flowers, fruits or even some vegetative parts, presence/absence of latex, time of opening of flowers, dehiscence of anthers and dry fruits, phenology, exact locality, nature of soil, associated plant species and so on. In the case of arborescent members, diameter of the trunk and characters of the bark were also recorded. Associations, distribution and the relative abundance were carefully noted. Local names and uses were also noted.

Descriptions were made from fresh material for the majority of plants. Pickled materials and herbarium specimens were used in some cases. Descriptions were compared with those found in

earlier floras of the area. Artificial keys were prepared which are strictly dichotomous. Drawings of some interesting plants were made to scale. Some plants and important vegetational aspects were photographed.

The plants were provisionally determined using Gamble & Fischer's (1915-1935) "Flora of the Presidency of Madras". Hooker's (1872-1897) "Flora of British India", Mayuranathan's (1929) "The Flowering Plants of Madras City and its immediate neighbourhood" and Barnes' (1938) "The Supplement to the Flowering Plants of Madras City and its immediate neighbourhood" were also consulted. Critical specimens were compared with authentic specimens at the Madras Herbarium, Coimbatore (MH). A few critical ones were sent to specialists for their opinion. Recent monographs and relevant research floras were consulted wherever possible, mainly to know the correct identity and nomenclature of the taxa.

Specimens collected by earlier workers and deposited at the Madras Herbarium, Coimbatore and three local herbaria, namely, the Madras Christian College Herbarium of Tambaram, the Madras Museum Herbarium of Madras and the Presidency College Herbarium of Madras were also examined.

ABBREVIATIONS

1. Bailey — Bailey, L.H. 1949. *Manual of Cultivated Plants*, New York.
2. Barnes — Barnes, E. 1938. Supplement to the Flowering Plants of Madras City and its immediate neighbourhood. *Bull. Madras Govt. Mus.* N.S.4(2):1-46. tt.1-7
3. BBSB — *Bulletin of the Botanical Society of Bengal*
4. BBSI — *Bulletin of the Botanical Survey of India*
5. BICS — Bor, N.L. & M.B. Raizada, 1954. *Some Beautiful Indian Climbers and Shrubs*, Bombay.
6. BIT — Blatter, E. & W.S. Millard. 1954. *Some Beautiful Indian Trees* (rev. W.T. Stearn) ed.2. Bombay.
7. Bor — Bor, N.L. 1960. *Grasses of Burma, Ceylon, India and Pakistan. (Excluding Bambusaceae)*, Oxford.
8. Brown — Brown, R.N. 1862. *A Handbook of the Trees, Shrubs and Herbaceous Plants growing in the Madras Agri-Horticultural Society's Garden and neighbourhood of Madras*. Higginbotham, Madras.
9. FBI — Hooker, J.D. (ed.) 1872-1897. *The Flora of British India* Vols. 1-7. London.
10. FFI — *Fascicles of the Flora of India* B.S.I. Howrah.
11. FPM — Gamble, J.S. & C.E.C. Fischer 1957 (repr. ed.) *Flora of the Presidency of Madras* Vols. 1-3. Calcutta.

12. FTN — Nair, N.C. & A.N. Henry 1983. *Flora of Tamil Nadu, India . Series I: Analysis*. Vol.I. B.S.I. Coimbatore
13. JBNHS — *Journal of Bombay Natural History Society*
14. JIBS — *Journal of the Indian Botanical Society*.
15. Mayur. — Mayuranathan, P.V.1929. The Flowering Plants of Madras City and its immediate neighbourhood. *Bull. Madras Govt. Mus.* N.S. 2:1-345. tt.1-38
16. Pursglove, TCD — Pursglove 1977. *Tropical Crops, Dicots*, Singapore.
17. Rang. & Mud. — Rangachariar, K. & C.T. Mudaliar 1921. *A Handbook of Some South Indian Grasses*. Government Press, Madras.
18. RBSI — *Records of the Botanical Survey of India*.
19. Wood — Wood, J.J. 1866. ed.2. *A Handbook of the Trees, Shrubs, and Herbaceous Plants growing in the Madras Agri-Horticultural Society's Garden and Neighbourhood of Madras* (R.N.Brown's book revised with a Supplement), Higginbotham, Madras.

VEGETATION TYPES AND FLORISTIC COMPOSITION

The general vegetation of the area is of *Albizia amara* and *Acacia* series (Gaussen et al., 1964). However, in most of the areas, it is degraded to different degrees or variously modified due to continuous human interference like felling, lopping, grazing, and introduction of aliens.

FOREST VEGETATION

Madras City and Chengalpattu District together have a total forest area of about 439 sq. km. Thick forests are found in places like Chengalpattu, Guduwancheri, Guindy, Paranur, Santhoshapuram, Tambaram, Thirupporur, Vandalur and Vengambakkam. Most of the forest areas have thorny scrub jungles degraded to different degrees. Gaussen et al. (1964) recognise four types of forest under *Albizia amara* and *Acacia* series, namely, scrub-woodland, continuous thorny thicket, discontinuous thorny thicket and scattered shrubby facies. All these four types of forests are encountered within the area of the present study.

Scrub Woodland:

This forest type is equivalent to the tropical dry evergreen forest of Champion and Seth (1968). The best scrub-woodland (Plate I) is seen in parts of Tambaram where the forest is protected to a great extent. The top canopy scarcely reaches a height of 10-15 metres. Some of the common trees are *Albizia lebbek*, *Eriosema chloroxylon*, *Lannea coromandelica* and *Syzygium cumini*. *Albizia amara* and *A. odoratissima* are rare trees of this forest. Plants like *Atalantia monophylla*, *Bauhinia racemosa*, *Drypetes spiciata*, *Grewia orbiculata* and *Ziziphus xylopyrus* occasionally grow as trees. *Caparis sepiaria*, *Cissus vitiginea*, *Combretum albidum*, *Derris scandens*, *Hugonia*



PLATE I - Scrub Woodland - Tambaram



*PLATE II - Continuous Thorny Thicket -
Tambaram*



*PLATE III - Discontinuous Thorny Thicket -
Tambaram*



*PLATE IV - Scattered Shrubby Facies (Early stage) -
Vandalur*



*PLATE V - Scattered Shrubby Facies (Later stage) -
Tambaram Hill*



PLATE VI - Proestuarine Vegetation - Ennur

mystax, *Grewia orientalis*, *Pachygone ovata*, *Scutia myrtina*, *Ventilago madraspatana*, *Wattakaka volubilis* and *Ziziphus oenoplia* often assume lianous habit. *Tinospora cordifolia* is another notable climber with dense canopy on top of trees and prominent thread-like, hanging aerial roots. Ornamental/avenue trees like *Bauhinia purpurea*, *Cassia fistula*, *C. siamea*, *Delonix regia* and *Peltophorum pterocarpum* are found in a naturalised state in some parts of this forest.

The undergrowth is mixed with armed and unarmed shrubs. Some of the common unarmed shrubs are *Allophylus serratus*, *Canthium dicoccum*, *Diospyros ferrea* var. *buxifolia*, *Glycosmis mauritiana*, *Memecylon edule*, *Tarenna asiatica* etc. The more common armed shrubs are *Benkara malabarica*, *Carissa spinarum*, *Dichrostachys cinerea*, *Gmelina asiatica*, *Maytenus emarginata* and *Securinega leucopyrus*.

The ground cover which is seen along the peripheral regions of the forest especially after the monsoon includes grasses like *Apluda mutica*, *Aristida setacea*, *Bothriochloa pertusa*, *Cymbopogon travancorensis*, *Heteropogon contortus* and *Perotis indica*. The other common herbs and undershrubs are *Commelina ensifolia*, *Cyanotis tuberosa*, *Dipteracanthus prostratus*, *Habenaria roxburghii*, *Justicia prostrata*, *Pseudarthria viscida* and *Urginea indica*.

Continuous Thorny Thicket:

This (Plate II) represents the next stage in the degradation of the original forest and corresponds to the southern tropical thorn forest of Champion and Seth (1968). Thorny thickets are found in Chengalpattu, Guduwancheri, Paranur, Santhoshapuram, Vandalur, Vengambakkam etc. Trees are scattered and many of them are seen as coppice. *Lannea coromandelica* is the most common tree. *Acacia leucophloea*, *Dolichandrone falcata*, *Grewia orbiculata* and *Wrightia tinctoria* are some of the less common trees. *Euphorbia antiquorum* and *E. nivulia* assume tree habit in some places. Plants seen as lianes in scrub-woodland are seen as ordinary climbers of stragglers in thorny thickets. Thorny shrubs are more prominent and unarmed shrubs are seen in isolated patches, often protected by the thorny shrubs. *Pterolobium hexapetalum* is the most common shrub straggling over vast areas and its strong, hooked prickles make the thickets impenetrable. The other common thorny shrubs are *Atalantia monophylla*, *Benkara malabarica*, *Canthium parviflorum*, *Carissa spinarum*, *Catunaregam spinosa*, *Maytenus emarginata*, *Psilanthus wightianus*, *Ziziphus oenoplia* etc. Some of the common unarmed shrubs are *Diospyros ferrea* var. *buxifolia*, *Memecylon edule* and *Tarenna asiatica*. *Abrus precatorius*, *Asparagus racemosus*, *Gymnema sylvestre*, *Ichnocarpus frutescens*, *Jasminum angustifolium* and *Rivea hypocrateriformis* are some of the common climbers.

Discontinuous Thorny Thicket:

This represents the next stage in the degradation and it also corresponds to the southern tropical thorn forest of Champion and Seth (1968). Discontinuous thorny thickets (Plate III) occur along the periphery of the continuous thorny thickets. These are located nearer to villages and hence there is more human interference as a result of which the forests have become more open with scattered shrubs. Trees are totally absent. Ground cover is very prominent in the open spaces between the shrubs, especially after the rains. The ground cover consists of grasses and other herbs. Some common grasses are *Aristida setacea*, *Heteropogon contortus* and *Perotis indica*. Other common herbs are *Dipteracanthus prostratus*, *Justicia glauca*, *Leptogathis cristata*, *Scilla hyacinthina* and *Tephrosia purpurea*. Species of *Caralluma* and orchids like *Eulophia epidendrea* grow under protected conditions within the stunted, thorny shrubs.

Scattered Shrubby Facies:

This (Plates IV & V) represents the final stage in the degradation of the forests and it corresponds to the southern *Euphorbia* semi-desert scrub of Champion and Seth (1968). Hillocks of Pallavaram and Tambaram show this type of highly degraded forest. *Euphorbia antiquorum* is the dominant shrub and the less common shrubs are *Psilanthus wightianus*, *Securinega leucopyrus* etc. Ground cover is very prominent after the rains. It includes the common grasses and other herbs found in the other forests. Trees are totally absent.

SEASHORE VEGETATION

The area of study has a long seashore extending from Ennur in the north to Vayalur in the south and it is mostly sandy with outcrops of rocks at Mahabalipuram and Kovalam. The sandy belt is however broken at four points by the deltas of the Korttalaiyar, Coovum, Adayar and Palani rivers.

The major part of the coastal stretch is very much disturbed by human interference. The various beaches, Beach Resort Centres and the Madras Harbour are centres of busy human activities. Seashore near Ennur is polluted by industrial effluents. In spite of all these damaging effects, there are isolated areas where seashore vegetation flourishes. The seashore vegetation can be classified into strand sand vegetation and Proestuarine vegetation.

Strand Sand Vegetation:

Rao and Sastry (1972) recognise four zones in this. In this area three of these zones can be recognised with some overlapping and these are open pioneer zone, closed herbaceous zone and inner woodland zone.

In the open pioneer zone, the dominant species is either *Ipomoea pes-caprae* or *Spinifex littoreus*. The less prominent species are *Cyperus arenarius*, *Gisekia pharnaceoides*, *Launaea sarmentosa*, *Mollugo cerviana* and *M. disticha*.

In the closed herbaceous zone, plants like *Allmania nodiflora*, *Alternanthera pungens*, *Boerhavia diffusa*, *Euphorbia rosea*, *Mollugo* spp., *Sesamum prostratum*, *Sida cordifolia*, *Solanum virginianum*, *Tephrosia purpurea*, *Trachys muricata* etc. are seen.

The inner woodland zone is represented by woody species like *Calamus rotang*, *Carissa spinarum*, *Clerodendrum inerme*, *Eugenia bracteata*, *Pandanus odoratissimus*, *Prosopis juliflora*, *Sapindus emarginatus*, *Scutia myrtina*, *Securinega leucopyrus* etc.

Proestuarine Vegetation:

Rao and Sastry (1977) describe proestuarine vegetation under estuarine vegetation. Proestuarine vegetation can be divided into three subtypes, namely, tidal mangrove, euhaline and prohaline.

Tidal mangrove is characterised by the luxuriantly growing shrubs and trees in a waterlogged condition. Soil is muddy with very poor aeration. Remnants (Plate VI) of tidal mangrove are seen

in the delta of Adayar river, parts of Buckingham Canal and along the backwaters of Ennur. *Avicennia marina* is the only species representing the tidal mangrove. There are two forms of this species occupying different areas. One of them is the shrubby form found at Ennur and the other is the tree form found at Adayar and along Buckingham Canal.

Euhaline type is characterised by the presence of highly salt-tolerant species, capable of growing in dry or wet soil. A rich vegetation of this type is seen in Ennur, along the backwaters. Some of the common species are *Aeluropus lagopoides*, *Arthrocnemum indicum*, *Cressa cretica*, *Salicornia brachiata*, *Sesuvium portulacastrum*, *Suaeda maritima* and *S. nudiflora*.

Prohaline type is characterised by species which are tolerant to salt to some extent. Vegetation on the banks of Adayar delta (upland relief beyond mangrove area) represents this type. Some common species are *Caesalpinia bonduc*, *Cerbera odollam*, *Derris trifoliata*, *Excoecaria agallocha*, *Pongamia pinnata*, and *Thespesia populnea*.

SEASONAL VEGETATION

While all the woody species and many herbaceous species can be seen throughout the year, there are some herbaceous plants that are seasonal. Most of these seasonal plants are annuals, but a few perennate by underground corms, bulbs etc. Rainfall and temperature are the chief factors which influence the growth and reproduction of these seasonal plants. Seasonal herbs of this area can be subdivided into three broad categories, namely, southwest monsoon herbs, northeast monsoon herbs and summer herbs.

SouthWest Monsoon Herbs:

The southwest monsoon brings only slight or moderate rainfall, sometime during June-September. The vegetation which has remained rather dry in summer turns lush green with the onset of the monsoon. Grasses and a variety of other terrestrial herbs and undershrubs grow luxuriantly. Many of these plants continue to grow and reproduce till the next summer. But a few of these are seasonal. *Scilla hyacinthina* with underground bulb is one of the earliest seasonal herbs to appear during this monsoon in scrub jungles. *Habenaria roxburghii*, a ground orchid with underground corm makes its appearance sometime by the end of the monsoon. *Cassia puthila* and *Cleome aspera* are two common seasonal annuals. *Martynia annua*, an alien weed of waste places is another annual showing robust growth during this short season.

NorthEast Monsoon Herbs:

The northeast monsoon brings heavy rains, sometime during October-November. Occasional heavy downpours are also experienced in December or January. As a result of this monsoon, lakes and ponds get filled up, rivers occasionally get flooded and low-lying areas usually water-logged. Aquatics and semiaquatics make their appearance wherever there is water. Herbs commonly observed are *Bergia capensis*, *Blyxa octandra*, *Eleocharis dulcis*, *Lagarosiphon alternifolia*, *Limnophila* spp., *Ottelia alismoides*, *Schoenoplectus articulatus* etc. *Glossostigma diandra* forms green carpets in shallow water, especially along the margins of lakes. Most of these plants thrive till early summer.

On wet situations near lakes and rice fields, plants like *Canscora heteroclita*, *Cyperus* spp., *Dopatrium* spp., *Drosera* spp., *Eriocaulon* spp., *Osbeckia zeylanica*, *Striga* spp. etc are commonly seen. *Habenaria viridiflora* is a rare ground orchid of this habitat. All these plants thrive till early summer when the clayey soil begins to dry up.

Summer Herbs:

Lakes, ponds and other low-lying areas dry up in summer. The clayey soil becomes hard and only a few species with xeromorphic features such as prostrate habit, succulence, dense tomentum, thick cuticle etc. are able to thrive here. Some of these herbs are *Alternanthera paronychioides*, *Zoldenia procumbens*, *Glinus lotoides*, *Grangea maderaspatana*, *Heliotropium ovalifolium*, *Polygonum plebeium* etc. These herbs flourish in summer and continue to grow till the next monsoon when they are suppressed by newly growing robust monsoon herbs or destroyed by waterlogging.

FLORA OF FRESH-WATER LAKES, PONDS AND DITCHES

Northeast monsoon brings in heavy rains and this results in the filling of lakes and ponds. Low-lying areas become waterlogged. There are occasional floods in rivers and canals. The rainy season is followed by the rapid growth of aquatics (Plate VII).

Submerged Aquatics:

Blyxa octandra, *Ottelia alismoides* and *Vallisneria natans* are submerged and attached to the soil below. The flowers alone emerge above the water surface. Plants like *Ceratophyllum demersum*, *Hydrilla verticillata*, *Lagarosiphon alternifolia* and *Najas graminea* are other submerged ones. They are rooted below at first and later become detached from the soil.

Free-Floating Aquatics:

Plants like *Eichhornia crassipes*, *Ludwigia adscendens*, *Neptunia oleracea* and *Pistia stratiotes* are quite conspicuous among the free-floating aquatics. Of these, *Eichhornia crassipes* is the most common species. However, they all become rooted in mud when the water level decreases. *Lemna perpusilla*, *Spirodela polyrhiza* and *Wolffia globosa* are much-smaller, free-floating plants, often found hidden between the other floating aquatics. Sometimes they form a green carpet on water.

Attached Aquatics:

Nelumbo nucifera, *Nymphaea nouchali* and *N. pubescens* are attached to the soil below. They have long petioles. Flowers are large and showy and are seen above water. *Nymphaoides cristatum* is also rooted below. It has petiole-like stems with floating leaves and the flowers are lifted above water. *Ipomoea aquatica* is generally rooted along the margins of ponds and its branches grow over the water surface. *Pseudoraphis spinescens* is a grass of lakes rooted to the soil and the branches emerge above the water.



PLATE VII - Aquatic Vegetation - Red Hills Lake



**PLATE VIII - "Pseudoepiphytes" on Banyan Trunk -
Vandalur**



*PLATE IX - Flora along railway tracks -
Meenambakkam*

Semi-aquatics:

Aponogeton natans, *Limnophila indica* and *Monochoria vaginalis* are the more common semiaquatics. *Limnophila indica* is remarkably heterophyllous. When it is submerged, it produces highly dissected leaves and when it is terrestrial, the leaves are ovate-lanceate. *Eleocharis dulcis*, *E. geniculata*, *Fimbristylis schoenoides* and *Schoenoplectus articulatus* are some common semiaquatic sedges.

FLORA OF WETLANDS

Wetlands are associated with lakes, rice fields and water-springs at the foot of hillocks. Some common plants of such wetlands are *Canscora heteroclita*, *Commelina diffusa*, *Dopatrium junceum*, *D. nudicaule*, *Drosera burmannii*, *Eriocaulon* spp., *Hoppea dichotoma*, *Lindernia crustacea*, *Ludwigia perennis*, *Murdannia nudiflora*, *M. spirata*, *Stemodia viscosa*, *Striga angustifolia* and *Utricularia polygaloides*. Some of the common sedges are *Cyperus difformis*, *C. exaltatus* and *C. iria*. *Echinochloa colona*, *Ophiuros exaltatus*, *Paspalidium geminatum* and *Paspalum scrobiculatum* are some of the common grasses.

FLORA OF ROADSIDES AND RAILWAY TRACKS

Along roadsides avenue trees like *Ficus benghalensis*, *Kigelia africana*, *Samanea saman* and *Tamarindus indica* are commonly grown. An observation of interest is that almost all old trees of *Ficus benghalensis* (Banyan), especially those growing near Vandavur forest harbour several plants in the concavities between their lower branches. Most of these plants growing on such banyan trees are shrubs or trees with fleshy fruits that are common in the neighbouring forest. It is obvious that birds which feed on the fleshy fruits of these plants are responsible for their dispersal over these trees. Many of these 'pseudoepiphytes' (Plate VIII) flower and fruit regularly in this artificial home. In many such 'pseudoepiphytes', their roots force their way through the soft and partially decayed wood of these host trees and reach the soil. Some of the pseudoepiphytic shrubs and trees are *Atalantia monophylla*, *Azadirachta indica*, *Capparis brevispina*, *C. zeylanica*, *Drypetes sepiaria*, *Morinda pubescens*, *Securinega leucopyrus* and *Ziziphus oenoplia*. A common herbaceous plant which is found on these banyan trees is *Sansevieria roxburghiana*. Its roots do not penetrate the host tissues. The plant lives on the dust and humus that have accumulated in the concavities and crevices of the bark of the host.

Along roadsides and railway tracks there are thorny thickets and scattered shrubs (Plate IX). The common plants of thorny thickets are *Canthium parviflorum*, *Opuntia dillenii*, *Prosopis juliflora*, *Securinega leucopyrus* and *Ziziphus oenoplia*. In waste places often *Prosopis juliflora* is the dominant species. Among the more common unarmed scattered shrubs, mention may be made of *Calotropis gigantea*, *Ficus hispida*, *Ipomoea carnea* subsp. *fistulosa* and *Ricinus communis*.

The herbaceous vegetation of these waste places are represented by weeds of various kinds. Common terrestrial weeds that are seen almost throughout the year are *Amaranthus spinosus*, *Cassia occidentalis*, *C. tora*, *Cleome viscosa*, *Croton bonplandianus*, *Datura innoxia*, *D. metel*, *Glinus oppositifolius*, *Heliotropium indicum*, *Leucas aspera*, *Parthenium hysterophorus*, *Sida cordifolia* and *Turnera subulata*. They flourish soon after the rains. *Martynia annua* comes up

soon after the first rain after summer (southwest monsoon). It flowers and fruits quickly and disappears with the arrival of the northeast monsoon and the consequent floods. Soon after the northeast monsoon, aquatic weeds like *Eichhornia crassipes* and *Ottelia alismoides* and various semiaquatic sedges appear in abundance along waterlogged areas near railway tracks. Several species of terrestrial weeds come up in other places. *Leonotis nepetifolia* and *Peristrophe paniculata* are two important weeds that appear after these heavy rains. *Argemone mexicana* and *Blumea mollis* appear much later. By early summer most of the herbs begin to disappear. A few xerophytic herbs now appear, often with small succulent leaves or with woolly tomentum. Some of these xerophytic herbs are *Alternanthera paronychioides*, *Coldenia procumbens*, *Glinus lotoides*, *Gomphrena serrata*, *Portulaca oleracea*, *Trianthema portulacastrum* and *Zaleya decandra*.

FLORA OF PLAYGROUNDS AND OTHER OPEN GROUNDS

Annual and perennial herbs of various kinds are found to grow in open grounds including playgrounds. Some of the more common herbs are *Alysicarpus monilifer*, *Aristida funiculata*, *Castia pumila*, *Cynodon dactylon*, *Desmodium triflorum*, *Euphorbia hirta*, *E. thymifolia*, *E. nummularius*, *Glinus oppositifolius*, *Goniogyna hirta*, *Hybanthus emersipennis*, *Indigofera linnaei*, *Mollugo nudicaulis*, *M. pentaphylla*, *Perotis indica*, *Polygala arvensis*, *Rhynchosia aurea*, *Tephrosia pumila* and *Zornia gibbosa*.

FLORA OF HEDGES

Plants which can easily be propagated by vegetative means are generally chosen as hedge plants. *Ipomoea turneora* subsp. *fistulosa* is the most common hedge plant. It is propagated by cuttings and grows in all types of soils. The other common hedge plants vegetatively propagated are *Acanthocereus tetragonus*, *Agave angustifolia*, *Euphorbia antiquorum*, *Jatropha tanjorensis* and *Opuntia dillenii*. A few other hedge plants like *Casababela thevetia*, *Casuarina litorea* and *Prosopis juliflora* are propagated by seeds. These are quick-growing and drought-resistant. Several climbers are often associated with hedges. The more common ones are *Cardiospermum halicacabum*, *Clitoria ternatea*, *Coccinia grandis*, *Ipomoea cairica*, *Leptadenia reticulata*, *Passiflora foetida*, *Pergularia daemia*, *Tylophora indica* etc.

FLORA OF OLD WALLS

Seedlings of *Ficus amplissima*, *F. benghalensis* and *F. religiosa* are commonly found growing on walls. In some places of the city, they have grown into small trees on old, abandoned walls and they flower and fruit regularly. Birds are the dispersal agents of their fruits/seeds. *Calotropis gigantea*, a shrub, sometimes grows on old walls and flowers and fruits regularly. The parachute mechanism in the dispersal of their seeds enables them to get an easy hold on old walls. Many herbs are also seen growing on old walls and some of the more common ones are *Ageratum conyzoides*, *Blumea mollis*, *Tridax procumbens* and *Vernonia cinerea*. All these belong to the family Asteraceae. Their achenes have pappus and they easily get dispersed by wind. *Boerhavia diffusa* is also often seen growing on walls. There are viscid glands on their anthocarps which get dispersed accidentally through birds or other animals.

FLORA OF GARDENS AND PARKS

In Madras City and its environs, there are numerous public and private gardens and parks. The gardens and parks have avenue trees, ornamental trees, shrubs, climbers and herbs.

Avenue Trees:

More common avenue trees cultivated in gardens and parks are *Delonix regia*, *Ficus benghalensis*, *Filicium decipiens*, *Hura crepitans*, *Kigelia africana*, *Millingtonia hortensis*, *Peltophorum pterocarpum*, *Samanea saman*, *Sterculia foetida*, *Tabebuia rosea* and *Terminalia arjuna*.

Ornamental Trees:

Some ornamental trees cultivated in gardens and parks are *Caryota urens*, *Casearia* spp., *Albizia officinale*, *Lagerstroemia reginae*, *Polyalthia longifolia*, *Roystonea regia* and *Sapium* spp.

Ornamental Shrubs and Climbers:

Some of the common ornamental shrubs are *Bauhinia tomentosa*, *Caesalpinia pulcherrima*, *Cascabela thevetia*, *Cestrum diurnum*, *Clerodendrum inerme*, *Codiaeum variegatum*, *Duranta erecta*, *Ervatamia divaricata*, *Hibiscus rosa-sinensis*, *H. schizopetalus*, *Ixora coccinea*, *Nerium oleander*, *Plumeria rubra*, *Tecoma stans* and *Thunbergia erecta*.

Allamanda cathartica, *Antigonon leptopus*, *Bougainvillea spectabilis*, *Clitoria ternatea*, *Ipomoea quamoclit*, *Quisqualis indica* and *Thunbergia grandiflora* are some of the climbers.

Ornamental Herbs:

Ornamental herbs that are common are *Aloe vera*, *Canna indica*, *Catharanthus roseus*, *Helianthus annuus*, *Impatiens balsamina*, *Tagetes* spp., *Zebrina pendula* and *Zinnia elegans*.

ALIEN FLORA

The area, particularly around the urbanised localities presents a cosmopolitan flora. Although the alien plants naturalised represent only about 20% of the total number of species reported here, some of them dominate certain localities.

Alien Herbs:

Many alien herbs occur as weeds and they have come from tropical American countries. Some of the more common weeds of tropical American origin are *Acanthospermum hispidum*, *Alternanthera pungens*, *A. tenella*, *Argemone mexicana*, *Cassia hirsuta*, *C. occidentalis*, *Croton bonplandianus*, *Eichhornia crassipes*, *Euphorbia cyathophora*, *E. heterophylla*, *E. chamaesyce*, *Evolvulus nummularius*, *Gomphrena serrata*, *Heliotropium curassavicum*, *Hyptis suaveolens*, *Lagascea mollis*,

Macroptilium lathyroides, *Malachra capitata*, *Martynia annua*, *Melochia nodiflora*, *Mimosa pudica*, *Parthenium hysterophorus*, *Peperomia pellucida*, *Petiveria alliacea*, *Physalis minima*, *Rauvolfia tetraphylla*, *Rivina humilis*, *Ruellia tuberosa*, *Scoparia dulcis*, *Synedrella nodiflora*, *Tridax procumbens*, *Turnera subulata*, *T. ulmifolia* etc. While some of these were introduced for ornamental purposes, seeds of others have accidentally accompanied those of ornamentals, and in the import of grains.

Plants like *Catharanthus roseus*, *Gomphrena globosa*, *Helianthus annuus*, *Mirabilis jalapa*, *Pedilanthus tithymaloides*, *Pilea microphylla*, *Tagetes* spp., *Zinnia elegans* etc. have also been introduced from tropical American countries and they are found under cultivation or as escapes. *Kalanchoe pinnata* is a native of Africa and it is found under cultivation or as an escape. *Aloe vera* is a native of Mediterranean region. *Ananas comosus*, the pine apple, *Arachis hypogaea*, the ground nut, and *Lycopersicon esculentum*, the tomato, are natives of tropical America.

Alien Shrubs and Climbers:

Shrubs like *Lantana camara* var. *aculeata*, *Leucaena latisiliqua* and *Vachellia farnesiana* were introduced from tropical America and they are found under cultivation as well as in naturalised state. *Wikstroemia indica* which is naturalised in forests around Guindy is a native of Burma and Malaya.

Plants like *Bixa orellana*, *Bougainvillea spectabilis*, *Cassia alata*, *Cordia sebestena*, *Duranta erecta*, *Euphorbia pulcherrima*, *Plumeria rubra*, *Tecoma stans* etc. have been introduced from tropical America and are cultivated as ornamentals. *Cryptostegia grandiflora*, an ornamental, is a native of Africa. *Allamanda cathartica*, a native of Guiana and *Codiaeum variegatum*, a native of Moluccas are cultivated as ornamentals. *Lagerstroemia indica*, a native of China and *Quisqualis indica*, a native of Malaysian region are also cultivated as ornamentals.

Plants like *Cratogeomys tetragonus*, *Agave angustifolia*, *Furcraea foetida*, *Jatropha curcas*, *Manihot glazioviana*, *Opuntia* spp. etc. were introduced from tropical American countries. *Euphorbia pulcherrima* of African origin. Most of these plants are grown in rockeries and hedges. They are found in naturalised state.

Climbers like *Antigonon leptopus*, *Ipomoea hederifolia*, *I. nil*, *Passiflora foetida* etc. which are of tropical American origin are found in naturalised state.

Trees:

Anacardium occidentale, *Caesalpinia coriaria*, *Carica papaya*, *Ceiba pentandra*, *Couroupita guianensis*, *Guazuma ulmifolia*, *Manilkara zapota*, *Pithecellobium dulce*, *Prosopis juliflora*, *Psidium guajava*, *Samanea saman* and *Swietenia mahagoni* are some important trees introduced from tropical America. Some of these are cultivated as avenue trees, others as fruit trees etc. *Acacia digitata*, *Kigelia africana* and *Tamarindus indica* have come from Africa. *Berrya cordata* and *Polyalthia longifolia* are natives of Sri Lanka. *Delonix regia* is a native of Madagascar. *Parkia glandulosa* and *Peltophorum pterocarpum* have been introduced from Malayan region. *Mimosa hirsuta* is a native of Burma. *Terminalia catappa* is a native of the Moluccas.

ECONOMICALLY IMPORTANT PLANTS

FOOD PLANTS

Cereals:

Oryza sativa, the rice, is the most important cereal crop, cultivated in wetlands. *Eleusine coracana*, the ragi, is the chief dry land crop. *Pennisetum americanum*, *Setaria italica* and *Zea mays* are occasionally cultivated in dry lands.

Pulses:

Arachis hypogaea, the ground nut, is the most common leguminous crop cultivated in dry lands. Other less common ones are *Vigna mungo*, *V. radiata*, *V. unguiculata* subsp. *cylindrica* etc.

Vegetables:

Raphanus sativus, is a very common root vegetable cultivated in villages. Leaves of *Portulaca oleraceae*, *Portulaca sessilis*, *Amaranthus* spp., *Basella alba*, *Centella asiatica*, *Marsilea minuta*, *Moringa pterygosperma*, *Sesbania grandiflora*, *Solanum americanum* etc. are used as greens. Some common fruit vegetables are *Abelmoschus esculentus*, *Benincasa hispida*, *Cucumis sativus*, *Cucurbita maxima*, *Cyathopsis tetragonoloba*, *Lablab purpureus*, *Luffa acutangula*, *Lycopersicon esculentum*, *Solanum melongena*, *S. torvum*, *Trichosanthes cucurbitaria* and *Vigna unguiculata* subsp. *cylindrica*.

Fruits:

Annona reticulata, *A. squamosa*, *Carica papaya*, *Citrullus lanata*, *Cucumis melo*, *Mangifera indica*, *Manilkara zapota*, *Musa paradisiaca* and *Psidium guajava* are some of the common plants cultivated for the edible fruits. *Glycosmis mauritiana*, *Grewia orbiculata*, *Syzygium cumini* etc. are some common wild plants whose fruits are eaten.

Sugars:

Borassus flabellifer which yields the sugary palm juice from injured inflorescences is found growing wild in waste places. *Phoenix sylvestris* is another common palm tree yielding juice from the inflorescence.

Saccharum officinarum, the sugar cane, is occasionally cultivated in wetlands.

Spices and condiments:

Coriandrum sativum and *Murraya koenigii* are commonly cultivated in kitchen gardens. Seeds of the former and leaves of the latter are regularly used by people in flavouring curries and they are sold in markets. *Capsicum annuum*, *Coriandrum sativum* and *Foeniculum vulgare* are cultivated for their fruits used as spices. *Tamarindus indica* whose fruits are used in culinary preparations is found under cultivation as well as in naturalised state. *Brassica juncea* whose seeds are used as spice is found under cultivation and also as an escape.

Edible Oils:

Arachis hypogaea, *Cocos nucifera*, *Helianthus annuus* and *Sesamum indicum* are some of the cultivated plants yielding edible oil from their seeds.

FODDER PLANTS

Brachiaria mutica, the Para Grass, *Panicum maximum*, the Guinea Grass and *Pennisetum purpureum*, Elephant's Grass or the Napier's Fodder, are commonly cultivated around dairy farms. Apart from these, many other grasses growing wild are also relished by the cattle. Some common wild grasses are *Apluda mutica*, *Bothriochloa pertusa*, *Chloris barbata*, *Cynodon dactylon*, *Echinochloa colona*, *Panicum spp.*, *Paspalidium spp.* etc. *Medicago sativa*, the lucerne, is occasionally cultivated around dairy farms as a fodder.

FIBRE PLANTS

Gossypium arboreum and *G. barbadense* which yield soft, white, textile fibres from the seed coat are occasionally cultivated around houses. *Agave angustifolia* and *Furcraea foetida* which yield fibres from leaves are found as hedge plants. *Sansevieria roxburghiana*, the bowstring hemp, occurs wild in the forests. *Ceiba pentandra*, the white silk cotton tree, which yields soft, filling fibres from the fruits occurs under cultivation. *Bombax ceiba*, the red silk cotton tree, is rare and it grows wild. *Borassus flabellifer* which yields brush fibres from leaf bases and plaiting and rough, weaving fibres from leaf blades occurs wild in wastelands. *Cocos nucifera* which yields brush fibres from the mesocarp of fruits is found under cultivation around houses as well as along the seashores. *Phoenix spp.* which yield plaiting and rough, weaving fibres occurs in a wild state. *Eucalyptus tereticornis* which yields paper making fibres from the wood is cultivated in forests as a plantation crop.

PLANTATION CROPS

Plants of *Anacardium occidentale* (cashew) are seen in forest areas with red loamy soil on sandy seashores. Plantations of *Casuarina litorea* are seen in low-lying wetlands on sandy seashores. *Eucalyptus tereticornis* plantations are found in forest areas. In areas of sandy seashores *Cocos nucifera* (coconut) plantations are seen.

TIMBER TREES

Azadirachta indica, *Mangifera indica*, *Swietenia mahagoni*, *Syzygium cumini*, *Terminalia* and *Thespesia populnea* are some of the common timber trees.

PLANTS YIELDING ESSENTIAL OILS

Citronella odorata, *Jasminum spp.*, *Michelia champaca*, *Vachellia farnesiana* etc. yield essential oil from flowers. *Citrus spp.* have oil in the rind of fruits. *Cymbopogon travancorensis* has oil in the leaves and it grows wild. *Santalum album* which yields sandalwood oil from the heart wood rarely grows in forests. *Commersonia zizanioides* yields oil from the aromatic roots and it is found near lakes.

PLANTS YIELDING CUMS

Acacia nilotica subsp. *indica*, *Albizia lebbeck*, *Azadirachta indica*, *Moringa pterygosperma* and *Prosopis juliflora* are some common plants yielding gum from injured bark.

PLANTS YIELDING TANNIN

Acacia nilotica subsp. *indica*, *Cassia auriculata* and *C. fistula* are some common plants yielding tannin from the bark. *Caesalpinia coriaria* is another common plant having tannin in the pods and in the bark.

PLANTS YIELDING DYE

Bixa orellana which is cultivated in some gardens yields a red dye from the seed coat. *Indigofera tinctoria* and *Lawsonia inermis* yield dye from leaves. *Hedyotis puberula*, a common weed yields dye from roots.

MEDICINAL PLANTS

Several plants traditionally used in Indian medicine have been collected. Some of the more important ones are *Acalypha indica*, *Andrographis paniculata*, *Asparagus racemosus*, *Azadirachta indica*, *Bacopa monnieri*, *Boerhavia diffusa*, *Cardiospermum halicacabum*, *Cissus quadrangularis*, *Corallocarpus epigaeus*, *Cynodon dactylon*, *Cyperus rotundus*, *Datura metel*, *Delonix elata*, *Desmodium gangeticum*, *Eclipta prostrata*, *Enicostema axillare*, *Gymnema sylvestre*, *Hedyotis corymbosa*, *Ipomoea pes-caprae*, *Jatropha gossypifolia*, *Labiata*, *Leucas aspera*, *Nelumbo nucifera*, *Ocimum* spp., *Olax psittacorum*, *Ormocarpum cochinchinense*, *Pergularia daemia*, *Phyllanthus amarus*, *Pseudarthria viscida*, *Solanum virginianum*, *S. trilobatum*, *Theophrasta cordifolia*, *Tylophora indica*, *Vitex negundo* and so on. Some medicinal plants like *Azadirachta indica*, *Catharanthus roseus*, *Rauvolfia serpentina*, *R. tetraphylla* and others are cultivated in medicinal gardens.

POISONOUS AND HARMFUL PLANTS

Abrus precatorius which has poisonous seeds grows wild in forests. *Cascabela thevetia* with poisonous seeds is usually cultivated as a hedge plant. *Cleistanthus collinus* which has poisonous shoots is occasionally seen in forests. *Gloriosa superba* has poisonous rhizomes and it is common in forests. *Nerium oleander* which has poisonous roots is cultivated in gardens and near temples as an ornamental.

Calotropis gigantea, *Euphorbia antiquorum* and others which have milky latex harm the eyes and skin grow wild in forests and waste places. *Parthenium hysterophorus* which is often claimed to be the causative of several types of allergic skin diseases grows as a weed in wastelands. *Tragia involucrata* and *T. plukenetii* which have stinging hairs grow wild in wastelands.

CONCLUSIONS

In the present work, 1041 taxa are reported and they belong to 601 genera and 146 families. All those taxa recorded by Mayuranathan and Barnes are included here. There is an addition of 157 taxa in this work and this includes 69 taxa of grasses (Poaceae). It is to be noted that Mayuranathan and Barnes did not include grasses in their work. There are 88 taxa distributed among the various other families. Forty seven of them are seen in a naturalised condition and the remaining 41 taxa occur under cultivation.

The following species and infraspecific taxa form new records for Chengalpattu District.

1. *Acacia lenticularis* Wall. ex Benth. (MIMOSACEAE)
2. *Acacia polyantha* Willd. (MIMOSACEAE)
3. *Albizia odoratissima* (L.f.) Benth. (MIMOSACEAE)
4. *Alysicarpus bupleurifolius* (L.) DC. var. *gracilis* (Edgew.) Baker (FABACEAE)
5. *Ampelocissus tomentosa* (Heyne ex Roth) Planch. (VITACEAE)
6. *Basilicum polystachyon* (L.) Moench (LAMIACEAE)
7. *Blainvillea acmella* (L.) Philipson (ASTERACEAE)
8. *Breynia retusa* (Dennst.) Alston (EUPHORBIACEAE)
9. *Cansjera rheedii* Gmel. (OPILIACEAE)
10. *Chionanthus zeylanica* L. (OLEACEAE)
11. *Cleome burmannii* Wight & Arn. (CLEOMACEAE)
12. *Corchorus tridens* L. (TILIACEAE)
13. *Cuscuta reflexa* Roxb. (CONVOLVULACEAE)
14. *Dumasia villosa* DC. (FABACEAE)
15. *Dyschoriste nagchana* (Nees) Bennet (ACANTHACEAE)
16. *Gardenia latifolia* Ait. (RUBIACEAE)
17. *Indigofera trifoliata* L. (FABACEAE)
18. *Limnophila polystachya* Benth. (SCROPHULARIACEAE)
19. *Lindernia minima* (Benth.) Mukherjee (SCROPHULARIACEAE)
20. *Melanocentris monoica* (Rottl.) Fischer (POACEAE)
21. *Memecylon edule* Roxb. (MELASTOMACEAE)
22. *Mitrasacme indica* Wight (LOGANIACEAE)
23. *Polygala javana* DC. (POLYGALACEAE)
24. *Portulaca suffruticosa* Wight & Arn. (PORTULACACEAE)
25. *Pseudoraphis spinescens* (R.Br.) Vick. (POACEAE)
26. *Pyrenacantha volubilis* Wight (ICACINACEAE)
27. *Reissantia indica* (Willd.) Halle (HIPPOCRATEACEAE)
28. *Salacia chinensis* L. (HIPPOCRATEACEAE)
29. *Solanum melongena* L. var. *incanum* (L.) Kuntze (SOLANACEAE)
30. *Strychnos lenticellata* Hill (LOGANIACEAE)
31. *Tephrosia strigosa* (Dalz.) Santapau & Mahesh. (FABACEAE)

Since the area of study is mostly a disturbed plain, it presents a rich and varied weed flora. Of the 1041 species and infraspecific taxa reported here, 596 are weeds and they are either terrestrial or aquatic. Of these 596 weeds, 46 are alien species. Some of them have become very common and a few are aggressive suppressing the growth of native herbs. Since Madras, a cosmopolitan city, forms the main part of the area of study, several alien species are constantly introduced for various reasons. Some of them get naturalised adding to the existing weed flora. The present work includes the first report of 2 new alien weeds for Tamil Nadu and 6 new alien weeds for Chengalpattu District:

NEW REPORT FOR TAMIL NADU (FORMERLY MADRAS STATE):

1. *Melochia pyramidata* L. (STERCULIACEAE)
2. *Alternanthera tenella* Colla (AMARANTHACEAE)

NEW REPORT FOR CHENGALPATTU DISTRICT:

1. *Alternanthera paronychioides* St.Hil. (AMARANTHACEAE)
2. *Boerhavia erecta* L. (NYCTAGINACEAE)
3. *Calopogonium mucunoides* Desv. (FABACEAE)
4. *Ludwigia hyssopifolia* (G.Don) Exell. (ONAGRACEAE)
5. *Macroptilium atropurpureum* (DC.) Urb. (FABACEAE)
6. *Mitracarpus villosus* (Sw). DC. (RUBIACEAE)

The present floristic study has helped in the reconstruction of the original forest that existed in the Madras City. It is quite obvious that this coastal city was once occupied by a dry evergreen forest except the areas near backwaters where there was a strip of mangrove vegetation. The Guindy National Park (Deer Park) is the only place within the city, still retaining the forest, even though in a much altered form. The best remnant of the original dry evergreen forest of this area is seen in the protected areas in Tambaram - the Madras Christian College Campus, a little south of Madras City. Most of the other forest areas outside the city of Madras are in different stages of degradation owing to severe human interference. The best remnant of the mangrove forest is seen in Adayar and this is under constant pressure of degradation. The flora of this area has undergone considerable change over the last sixty five years. Mayuranathan (1929) enumerated 831 taxa and Barnes (1938) added 53 taxa. Of these 884 taxa, about 100 could not be traced during the explorations conducted over the last fifteen years. The rarity/extinction of these taxa is chiefly due to increasing urbanization of the area and degradation of forests. The Guindy National Park (Deer Park) and the Arignar Anna Zoological Park at Vandalur, however, continue as protected areas wherein conservation activities take place. Several species of trees are grown here. Growing more trees will be of use not only to meet the fuel needs of the masses, but also to control the increasing pollution to some extent. Native trees such as *Acacia leucophloea* (Roxb.) Willd., *A. nilotica* subsp. *indica* (Benth.) Brenan, *Albizia lebbek* (L.) Willd., *Ficus benghalensis* L. etc. can be easily grown. Alien trees such as *Casuarina litorea* L., *Peltophorum pterocarpum* (DC.) Baker ex Heyne and *Prosopis juliflora* (Sw.) DC. are also recommended.

STATISTICAL ANALYSIS OF FLORA

Plant Group	Number of Families	Number of Genera	Number of Species and Intraspecific Taxa	Percentage of Species and Intraspecific Taxa
GYMNOSPERMS	2	2	2	0.19
DICOTYLEDONS	118	475	843	80.85
MONOCOTYLEDONS	26	124	196	18.96

TEN DOMINANT FAMILIES

S.No	Family	Number of Genera	Number of Species and Intraspecific Taxa	Percentage of Species and Intraspecific Taxa
1.	FABACEAE	43	87	8.32
2.	POACEAE	51	69	6.59
3.	EUPHORBIACEAE	21	53	5.07
4.	CYPERACEAE	12	41	3.92
5.	ACANTHACEAE	22	37	3.53
6.	MALVACEAE	13	37	3.53
7.	ASTERACEAE	29	36	3.44
8.	CAESALPINIACEAE	9	31	2.96
9.	CONVOLVULACEAE	9	29	2.77
10.	RUBIACEAE	15	28	2.67

SYSTEMATIC TREATMENT **ARTIFICIAL KEY TO THE FAMILIES**

1. Ovules enclosed in ovaries:
 2. Plants thalloid Lemnaceae
 2. Plants not thalloid:
 3. Anthers dehiscing by flap-like valves Lauraceae
 3. Anthers not dehiscing by flap-like valves:
 4. Leaves scaly or caducous (sometimes absent):
 5. Shrubs or trees:
 6. Flowers in cyathia Euphorbiaceae p.p.
 6. Flowers not in cyathia:
 7. Stems flattened Cactaceae p.p.
 7. Stems not flattened:
 8. Leaves whorled Casuarinaceae
 8. Leaves not whorled Cactaceae p.p.
 5. Herbs, undershrubs or climbers:
 9. Flowers in spikelets Cyperaceae p.p.
 9. Flowers not in spikelets:
 10. Stems jointed Chenopodiaceae p.p.
 10. Stems not jointed:
 11. Flowers zygomorphic:
 12. Stems purplish-red Scrophulariaceae p.p.
 12. Stems not purplish-red Lentibulariaceae p.p.
 11. Flowers actinomorphic:
 13. Stems parasitic Convolvulaceae p.p.
 13. Stems not parasitic:
 14. Flowers 5-merous Asclepiadaceae p.p.
 14. Flowers 3-merous Liliaceae p.p.
 4. Leaves not scaly, not caducous:
 15. Plants parasitic on stems Loranthaceae
 15. Plants not parasitic on stems:

- | | | | |
|---|----|----|-----------------------|
| 16. Pneumatophores present | .. | .. | Avicenniaceae |
| 16. Pneumatophores absent: | | | |
| 17. Plants fully submerged in water | | | |
| (Sometimes inflorescence alone emerging): | | | |
| 18. Ovary inferior or semi-inferior: | | | |
| 19. Ovary unilocular | .. | .. | Hydrocharitaceae |
| 19. Ovary 2-or more-locular: | | | |
| 20. Upper leaves rhomboid | .. | .. | Trapaceae |
| 20. Upper leaves not rhomboid | .. | .. | Haloragaceae p.p. |
| 18. Ovary superior: | | | |
| 21. Leaves dichotomous | .. | .. | Ceratophyllaceae |
| 21. Leaves not dichotomous: | | | |
| 22. Flowers zygomorphic: | | | |
| 23. Leaf segments with insectivorous bladders | .. | .. | Lentibulariaceae p.p. |
| 23. Leaf segments without insectivorous bladders | .. | .. | Scrophulariaceae p.p. |
| 22. Flowers actinomorphic: | | | |
| 24. Stamens solitary | .. | .. | Najadaceae |
| 24. Stamens 2 or more | .. | .. | Potamogetonaceae |
| 17. Plants not or only partially submerged in water | | | |
| (sometimes roots, stems and petioles submerged, leaving the | | | |
| leaf blades and flowers floating): | | | |
| 25. Leaves with parallel venation: | | | |
| 26. Fruit a nutlet or caryopsis: | | | |
| 27. Leaves distichous | .. | .. | Typhaceae |
| 27. Leaves not distichous: | | | |
| 28. Fruit a caryopsis | .. | .. | Poaceae |
| 28. Fruit a nutlet | .. | .. | Cyperaceae p.p. |
| 26. Fruit otherwise: | | | |
| 29. Plants armed: | | | |
| 30. Leaves lobed or compound | .. | .. | Arecaceae p.p. |

30. Leaves otherwise:			
31. Stems with stilt roots	..	..	Pandanaceae
31. Stems without stilt roots:			
32. Fruits with a crown of miniature leaves	..	..	Bromeliaceae
32. Fruits otherwise:			
33. Leaves fibrous	..	..	Agavaceae p.p.
33. Leaves not fibrous	..	..	Liliaceae p.p.
29. Plants unarmed:			
34. Flowers in heads:			
35. Ovary unilocular	..	..	Xyridaceae
35. Ovary 2-3-locular	..	..	Eriocaulaceae
34. Flowers not in heads:			
36. Ovary inferior:			
37. Ovules parietal	..	..	Orchidaceae
37. Ovules axile:			
38. Flowers with petaloid staminodes	..	..	Cannaceae
38. Flowers without petaloid staminodes:			
39. Inflorescence a compound spadix	..	..	Musaceae
39. Inflorescence not a compound spadix:			
40. Leaves fibrous	..	..	Agavaceae p.p.
40. Leaves not fibrous:			
41. Leaves plicate	..	..	Hypoxidaceae
41. Leaves not plicate	..	..	Amaryllidaceae
36. Ovary superior:			
42. Trees:			
43. Flowers 3-merous	..	..	Arecaceae p.p.
43. Flowers 4-merous	..	..	Clusiaceae
42. Herbs or climbers:			
44. Leaves fibrous	..	..	Agavaceae p.p.
44. Leaves not fibrous			
45. Leaves sessile:			

46. Outer perianth lobes smaller than the inner	..	..	Commelinaceae
46. Outer perianth lobes as long as the inner	..	..	Liliaceae p.p.
45. Leaves petiolate	..	..	Pontederiaceae
25. Leaves with reticulate venation:			
47. Inflorescence a spadix	..	..	Araceae
47. Inflorescence not a spadix:			
48. Pistils 2 or more (apocarpous):			
49. Trees, shrubs or climbers:			
50. Stems erect:			
51. Fruits winged	..	..	Simaroubaceae
51. Fruits not winged:			
52. Calyx persistent in fruit	..	..	Dilleniaceae
52. Calyx not persistent in fruit:			
53. Fruit an etaerio of follicles:			
54. Perianth multiseriate	..	..	Magnoliaceae
54. Perianth uniseriate	..	..	Sterculiaceae p.p.
53. Fruit otherwise:			
55. Fertile carpel one	..	..	Anacardiaceae p.p.
55. Fertile carpels many	..	..	Annonaceae
50. Stems straggling or climbing:			
56. Leaves compound	..	..	Ranunculaceae
56. Leaves simple	..	..	Menispermaceae
49. Herbs:			
57. Pistils sunk in torus	..	..	Nelumbonaceae
57. Pistils not sunk in torus:			
58. Carpels 3-5:			
59. Fruitlets 1-seeded:			
60. Flowers 4-merous	..	..	Potamogetonaceae p.p.
60. Flowers 5-merous	..	..	Molluginaceae p.p.
59. Fruitlets more than 5-seeded:			
61. Carpels 3	..	..	Aponogetonaceae
61. Carpels 4	..	..	Crassulaceae

58. Carpels more than 10	..	..	Alismataceae
48. Pistil 1 (Sometimes ovaries 2 or more, but with a common style or stigma):			
62. Ovary with 2 or more parietal placentae:			
63. Flowers 3-merous	..	..	Taccaceae
63. Flowers other than 3-merous:			
64. Corolla polypetalous:			
65. Plants with tendrils	..	..	Passifloraceae
65. Plants without tendrils:			
66. Herbs or undershrubs:			
67. Fruits spiny	..	..	Papaveraceae
67. Fruits not spiny:			
68. Plants insectivorous	..	..	Droseraceae
68. Plants not insectivorous:			
69. Pedicels adnate to petioles	..	..	Turneraceae
69. Pedicels free from petioles:			
70. Basal leaves lyrate	..	..	Brassicaceae
70. Basal leaves not lyrate:			
71. Capsules subglobose, 3-valved	..	..	Violaceae
71. Capsules cylindric, 2-valved	..	..	Cleomaceae
66. Trees, shrubs or climbers:			
72. Ovary on gynophore	..	..	Capparaceae
72. Ovary not on gynophore:			
73. Seeds winged	..	..	Moringaceae
73. Seeds not winged:			
74. Plants armed:			
75. Leaves simple	..	..	Flacourtiaceae
75. Leaves compound	..	..	Rutaceae p.p.
74. Plants unarmed:			
76. Fruit a capsule	..	..	Bixaceae
76. Fruit a berry	..	..	Caricaceae

64. Corolla gamopetalous:

77. Ovary inferior

.. .. Cucurbitaceae

77. Ovary superior:

78. Seeds enclosed by 2-hooked endocarp.

.. .. Martyniaceae

78. Seeds not enclosed by 2-hooked endocarp:

79. Anthers coherent to form a cone over the stigma

.. .. Apocynaceae p.p.

79. Anthers otherwise:

80. Plants terrestrial

.. .. Gentianaceae p.p.

80. Plants aquatic

.. .. Menyanthaceae

62. Ovary not with 2 or more parietal placentae:

81. Ovary unilocular (sometimes ovaries 2):

82. Perianth present:

83. Anthers coherent to form a cone over the stigma

.. .. Apocynaceae p.p.

83. Anthers otherwise:

84. Seeds comose:

85. Pollen masses waxy, contained in pollinia

.. .. Asclepiadaceae p.p.

85. Pollen masses granular, contained in spoon-shaped or
funnelform translators

.. .. Periplocaceae

84. Seeds not comose:

86. Plants with ochreate stipules

.. .. Polygonaceae p.p.

86. Plants without ochreate stipules:

87. Inflorescences ending in tendrils

.. .. Polygonaceae p.p.

87. Inflorescences not ending in tendrils:

88. Anthers syngenesious

.. .. Asteraceae

88. Anthers not syngenesious:

89. Ovules marginal or parietal:

90. Ovary 1:

91. Flowers zygomorphic:			
92. Corolla papilionaceous	..	..	Fabaceae
92. Corolla not papilionaceous	..	..	Caesalpiniaceae
91. Flowers actinomorphic	..	..	Mimosaceae
90. Ovaries 2:			
93. Styles distinct	..	..	Asclepiadaceae p.p.
93. Styles connate	..	..	Apocynaceae p.p.
89. Ovules not as above:			
94. Herbs or undershrubs:			
95. Perianth biseriate:			
96. Corolla polypetalous:			
97. Sepals 2	..	..	Portulacaceae
97. Sepals other than 2:			
98. Ovary superior	..	..	Caryophyllaceae
98. Ovary inferior	..	..	Vahliaceae
96. Corolla gamopetalous:			
99. Flowers zygomorphic	..	..	Lentibulariaceae p.p.
99. Flowers actinomorphic	..	..	Plumbaginaceae
95. Perianth uniserial:			
100. Perianth scarious	..	..	Amaranthaceae
100. Perianth not scarious:			
101. Fruit a circumscissile capsule	..	..	Aizoaceae p.p.
101. Fruit not as above:			
102. Stamens inflexed in bud	..	..	Urticaceae
102. Stamens not inflexed in bud:			
103. Perianth plicate in bud	..	..	Nyctaginaceae p.p.
103. Perianth not plicate in bud:			
104. Fruit an utricle	..	..	Chenopodiaceae p.p.
104. Fruit other than an utricle	..	..	Phytolaccaceae

94. Trees, shrubs or climbers:

105. Perianth biseriate:

106. Ovary inferior or semi-inferior:

- | | | | |
|---------------------------|----|----|----------------------|
| 107. Ovules pendulous | .. | .. | Combretaceae |
| 107. Ovules not pendulous | .. | .. | Melastomataceae p.p. |

106. Ovary superior:

- | | | | |
|--------------------------------------|----|----|--------------------|
| 108. Stamens epipetalous | .. | .. | Salvadoraceae p.p. |
| 108. Stamens not epipetalous: | | | |
| 109. Inflorescence a panicle | .. | .. | Anacardiaceae p.p. |
| 109. Inflorescence a raceme or spike | .. | .. | Opiliaceae |

105. Perianth uniseriate:

- | | | | |
|------------------------------------|----|----|--------------------|
| 110. Twigs succulent | .. | .. | Basellaceae |
| 110. Twigs not succulent: | | | |
| 111. Perianth plicate in bud | .. | .. | Nyctaginaceae p.p. |
| 111. Perianth not plicate in bud: | | | |
| 112. Climbers: | | | |
| 113. Twigs armed with thorns | .. | .. | Moraceae p.p. |
| 113. Twigs unarmed | .. | .. | Itacinaceae |
| 112. Trees or erect shrubs: | | | |
| 114. Fruit a syconus | .. | .. | Moraceae p.p. |
| 114. Fruit other than a syconus: | | | |
| 115. Calyx succulent in fruit | .. | .. | Moraceae p.p. |
| 115. Calyx not succulent in fruit: | | | |
| 116. Leaves opposite: | | | |
| 117. Ovary superior | .. | .. | Thymelaeaceae |
| 117. Ovary semi-inferior | .. | .. | Santalaceae |
| 116. Leaves alternate | .. | .. | Euphorbiaceae p.p. |

82. Perianth absent	..	..	Piperaceae
81. Ovary 2-or more-locular:			
118. Flowers 3-merous	..	..	Dioscoreaceae
118. Flowers other than 3-merous:			
119. Perianth uniseriate or absent:			
120. Fruit an etaerio of follicles	..	..	Sterculiaceae p.p.
120. Fruit not as above:			
121. Anthers adnate to the styler column	..	..	Aristolochiaceae
121. Anthers free from the style:			
122. Flowers unisexual:			
123. Fruits 2-4-winged	..	..	Sapindaceae p.p.
123. Fruits not winged	..	..	Euphorbiaceae p.p.
122. Flowers bisexual:			
124. Ovary 10-or more-locular	..	..	Sonneratiaceae
124. Ovary 2-5-locular:			
125. Stamens perigynous	..	..	Aizoaceae p.p.
125. Stamens hypogynous	..	..	Molluginaceae p.p.
119. Perianth 2-or more-seriate (rarely corolla caducous):			
126. Corolla polypetalous:			
127. Ovules on superficial placentae	..	..	Nymphaeaceae
127. Ovules not on superficial placentae:			
128. Ovary superior (sometimes sunk in a fleshy disc):			
129. Flowers zygomorphic:			
130. Flowers spurred	..	..	Balsaminaceae
130. Flowers not spurred:			
131. Petals 3	..	..	Polygalaceae
131. Petals 4-5:			
132. Fruit a samara	..	..	Malpighiaceae
132. Fruit not a samara:			

133. Androphores present	..	..	Sterculiaceae p.p.
133. Androphores absent	..	..	Sapindaceae p.p.
129 Flowers actinomorphic:			
134. Stamens 2	..	..	Oleaceae p.p.
134. Stamens other than 2:			
135. Plants with tendrils	..	..	Vitaceae
135. Plants without tendrils:			
136. Leaves gland-dotted, aromatic:			
137. Fruit a berry or hesperidium	..	..	Rutaceae p.p.
137. Fruit a capsule	..	..	Flindersiaceae
136. Leaves not gland-dotted, not aromatic:			
138. Leaves compound:			
139. Leaflets palmate	..	..	Bombacaceae
139. Leaflets pinnate:			
140. Filaments fully connate into a tube	..	..	Meliaceae
140. Filaments distinct or connate only at the base:			
141. Ovary 2-3-locular	..	..	Sapindaceae p.p.
141. Ovary 5-locular:			
142. Fruits fleshy at maturity	..	..	Averrhoaceae
142. Fruits dry at maturity	..	..	Zygophyllaceae
138. Leaves simple:			
143. Fruiting carpels distinct on a swollen torus	..	..	Ochnaceae
143. Fruiting carpels not as above:			
144. Plants laticiferous	..	..	Euphorbiaceae p.p.
144. Plants not laticiferous:			
145. Stamens monadelphous:			
146. Twigs with stellate hairs or peltate scales:			

147. Anthers reniform	..	..	Malvaceae
147. Anthers not reniform	..	..	Sterculiaceae p.p.
146. Twigs without stellate hairs or peltate scales	..	..	Linaceae
145. Stamens distinct:			
148. Twigs with paired axillary spines	..	..	Salvadoraceae p.p.
148. Twigs without paired axillary spines:			
149. Calyx gamosepalous:			
150. Hypanthium filled with a fleshy disc:			
151. Stamens 3:			
152. Staminodes present	..	..	Oleaceae
152. Staminodes absent	..	..	Hippocrateaceae
151. Stamens 4-5:			
153. Stamens alternate to petals	..	..	Celastraceae
153. Stamens opposite to petals	..	..	Rhamnaceae
150. Hypanthium not filled with a fleshy disc	..	..	Lythraceae
149. Calyx polysepalous:			
154. Placentae axile	..	..	Tiliaceae
154. Placentae pendulous	..	..	Elaeocarpaceae
128. Ovary inferior or semi-inferior:			
155. Herbs or undershrubs:			
156. Flowers in umbels or heads	..	..	Apiaceae
156. Flowers not in umbels or heads:			
157. Leaves alternate:			
158. Flowers bisexual	..	..	Onagraceae
158. Flowers unisexual	..	..	Haloragaceae p.p.
157. Leaves opposite	..	..	Melastomataceae p.p.
155. Trees or shrubs:			
159. Leaves opposite	..	..	Myrtaceae p.p.
159. Leaves alternate:			

160. Fruits over 10 cm across	..	..	Lecythidaceae
160. Fruits under 6 cm across	..	..	Barringtoniaceae
126. Corolla gamopetalous (sometimes calyptrate):			
161. Ovary inferior or semi-inferior:			
162. Corolla calyptrate, caducous	..	..	Myrtaceae p.p.
162. Corolla not as above:			
163. Twigs with interpetiolar stipules	..	..	Rubiaceae
163. Twigs without interpetiolar stipules:			
164. Flowers actinomorphic	..	..	Sphenocleaceae
164. Flowers zygomorphic	..	..	Campanulaceae
161. Ovary superior:			
165. Flowers actinomorphic:			
166. Stamens 2:			
167. Fruit a berry or drupe	..	..	Oleaceae p.p.
167. Fruit a capsule	..	..	Nyctanthaceae
166. Stamens more than 2:			
168. Plants laticiferous:			
169. Corolla lobes 2-4 times more than calyx lobes	..	..	Sapotaceae
169. Corolla lobes as many as calyx lobes:			
170. Ovaries 3-locular	..	..	Euphorbiaceae p.p.
170. Ovaries 2-or 4-locular	..	..	Convolvulaceae p.p.
168. Plants not laticiferous:			
171. Ovules 1 or 2 in each locule:			
172. Flowers unisexual	..	..	Ebenaceae
172. Flowers bisexual:			
173. Fruit a capsule or berry	..	..	Convolvulaceae p.p.
173. Fruit not as above:			
174. Fruits dry (nutlets) when mature	..	..	Boraginaceae
174. Fruits fleshy (drupe) when mature	Cordiaceae

171. Ovules many in each locule:

175. Stamens 10	Oxalidaceae
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175. Stamens 5 or less:

176. Leaves alternate:

177. Fruit a berry	Solanaceae p.p.
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177. Fruit a capsule:

178. Capsules spiny	Solanaceae p.p.
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178. Capsules not spiny	Hydrophyllaceae
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176. Leaves opposite:

179. Trees or shrubs	Loganiaceae p.p.
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179. Herbs:

180. Styles 2	Loganiaceae p.p.
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180. Style 1	Gentianaceae p.p.
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165. Flowers zygomorphic:

181. Ovules 1 or 2 in each locule:

182. Styles gynobasic	Lamiaceae
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182. Styles terminal:

183. Fruit a capsule	Acanthaceae p.p.
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183. Fruit other than a capsule:

184. Fruits spiny	Pedaliaceae p.p.
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184. Fruits not spiny	Verbenaceae
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181. Ovules 3 or more in each locule:

185. Trees, shrubs or climbers	Bignoniaceae
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185. Herbs or undershrubs:

186. Ovules on swollen placentae	Scrophulariaceae p.p.
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186. Ovules not on swollen placentae	Pedaliaceae p.p.
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1. Ovules not enclosed in ovaries:

187. Leaves simple	Araucariaceae
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187. Leaves pinnately compound	Cycadaceae
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GYMNOSPERMS**ARAUCARIACEAE****Araucaria Juss.**

Araucaria excelsa R.Br. in Ait.Hort. Kew ed. 2.5: 412. 1813; Mayur. 277; Bailey 103.

Trees, up to 10 m tall; branches whorled. Leaves 6-8 x 0.5-0.8 mm, subulate, rigid, dense, persistent.

Commonly cultivated in gardens as ornamental.

CYCADACEAE**Cycas L.**

Cycas circinalis L. Sp.Pl. 1188. 1753; FPM 975; Mayur. 277; Raizada & Sahni in Indian Forest Rec. Bot.5.95. 1958.

Small trees, up to 3 m tall. Leaves 1-2 m long; leaflets 15-25 x 0.8-1.2 cm, linear, microsporophylls in compact cones; megasporophylls loosely arranged. Seeds c.2.5 cm across, globose.

On rocky slopes. also cultivated; rare.

DICOTYLEDONS**RANUNCULACEAE****Naravelia DC. (nom.cons.)**

Naravelia zeylanica (L.) DC.Syst. 1:167. 1817; Brown 1; FBI 1:7; FPM 3; FTN 1:1. *Atragene zeylanica* L.Sp.Pl.542.1753.

Climbing shrubs. Leaves opposite; leaflets 3, the terminal often tendrillar, 13-20 x 6-11 cm, ovate-elliptic or ovate-lanceate, base obtuse to subcordate, apex shortly acuminate. Flowers c. 1.5 cm across. Achenes linear, with feathery styles.

Occasionally cultivated in gardens, also runs wild. Fl.: November-January. Fr.: January-March.

DILLENIACEAE**Dillenia L.**

1. Flowers under 10 cm across; corolla yellow:

2. Sepals sericeous

.. ..

D. bracteata

2. Sepals glabrous

.. ..

D. pentagyna

1. Flowers over 10 cm across; corolla white

.. ..

D. indica

Dillenia bracteata Wight, Ic.t.358. 1840; FBI 1:37 p.p.; FPM 5; Mayur.19; Hoogland in Blumea 7:34. 1952; Majumdar, FFI 2:6. 1979; FTN 1:2.

Trees, up to 5 m tall; twigs pubescent. Leaves 7-15 x 4-8 cm, oblong-lanceate. Flowers c. 8 cm across. Fruit of 5 membranous carpels, enclosed by succulent calyx.

In scrub jungles; rare. Fl.: February-April. Fr.: April-June.

Dillenia indica L.Sp.Pl.535. 1753; FBI 1:36 p.p.; FPM 5; Mayur.19; Hoogland 108; Majumdar 6; FTN 1:2. *D.speciosa* Thunb. in Trans.Linn. Soc. London 1:200. 1791; Brown 2.

Trees, up to 6 m tall. Leaves 20-30 x 5-10 cm, lanceate-elliptic, serrate. Flowers c. 15 cm across. solitary; sepals orbicular, fleshy.

Occasionally cultivated in gardens. Fl.: April - June. Fr.: June-August.

Dillenia pentagyna Roxb.Pl.Cor.t.20.1795; FBI 1:38; FPM 6; Hoogland 117; Majumdar 7; FTN 1:2.

Trees, up to 7 m tall; twigs glabrous. Leaves 40-65 x 10-25 cm - elliptic, biserrate, apex acute. Flowers c. 4 cm across, on defoliate branches. Fruit of 5 membranous carpels, enclosed by succulent calyx.

Occasionally cultivated in gardens. Leaf fall: February-March. Fl.: March-April. Fr.: May-July. Tamil: Naaitthaekku.

MAGNOLIACEAE

Michelia L.

Michelia champaca L. Sp.Pl.536. 1753; King in Ann. Roy.Bot. Gard. (Calcutta) 3:216. 1891; FBI 1:42; FPM 6; Mayur.20; FTN 1:3.

Trees, up to 13 m tall. Leaves 15-35 x 5-12 cm, elliptic-lanceate, apex acuminate. Flowers c. 5 cm across, yellow. Fruit an etaerio of follicles.

Occasionally cultivated in gardens. Fl.:December-March.

Flowers used by Hindus in worship. Tamil: Shenbagam.

ANNONACEAE

- | | | |
|--|---------|-------------------|
| 1. Fruits syncarpic | .. .. . | <i>Annona</i> |
| 1. Fruits not syncarpic: | | |
| 2. Climbing shrubs; peduncles hooked | .. .. . | <i>Artabotrys</i> |
| 2. Erect shrubs or trees; peduncles not hooked: | | |
| 3. Flowers over 5 cm across; fruitlets many-seeded | .. .. . | <i>Cananga</i> |
| 3. Flowers under 4 cm across; fruitlets 1-2-seeded | .. .. . | <i>Polyalthia</i> |

Annona L.

Fruits with raised areoles; leaves obtuse to acute at apex *A.squamosa*

Fruits without raised areoles; leaves acuminate at apex *A.reticulata*

Annona reticulata L. Sp. Pl. 537. 1753; Brown 3; FBI 1:78; FPM 14; Mayur.21; FTN 1:3; Huber in Dassan. & Fosb. Rev.Handb.Fl. Ceylon 5:73.1985.

Trees, up to 7 m tall. Leaves 10-28 x 4-7 cm, oblanceate-elliptic. Flowers c. 2 cm across, cream-coloured. Fruits c. 10 cm across; areoles angular.

Commonly cultivated around houses. Fl.: May-August.Fr.: July-November.

Fruits edible. Tamil: Raam seetha. English: The Bullock's Heart.

Annona squamosa L. Sp.Pl.537-1753; Brown 3; FBI 1:78; FPM 14; Mayur. 21; FTN 1:3; Huber 74.

Trees, up to 6 m tall. Leaves 10-15 x 5-7 cm, ovate-elliptic or ovate-lanceate. Flowers c. 3 cm across, cream-coloured, leaf-opposed or terminal.

Commonly cultivated around houses. FL.: April-August. Fr.: June-October.

Fruits edible. Tamil: Seetha. English: The Custard Apple.

Artabotrys R.Br.

Artabotrys hexapetalus (L.f.) Bhandari in Bailey 12(4) : 149. 1964; Huber in Dassan. & Fosb. Rev.Handb.Fl. Ceylon 5:51. 1985. *Annona hexapetala* L.f. Suppl. Pl. 270. 1781. *Artabotrys odoratissimus* R.Br in Edward's Bot. Reg. 423. 1820; King in Ann. Roy. Bot.Gard. (Calcutta) 4:44. 1893; Brown 4; FBI 1:54; FPM 10; Mayur. 20; FTN 1:3.

Leaves 10-20 x 3-7 cm, oblanceate-elliptic, shiny, apex acuminate. Flowers c. 3 cm across, very fragrant, pale yellow, on leaf-opposed peduncles. Fruitlets up to 2.5 x 1.5 cm.

Commonly cultivated in gardens. Fl. & Fr.: throughout the year. Tamil : Manoranjitham.

Cananga (DC.) Hook.f.& Thoms. (nom.cons.)

Cananga odorata (Lam.) Hook.f.& Thoms. Fl. Ind.130. 1885; FBI 1:56; Sinclair in Gard.Bull.Straits Settle. 14:324. 1955; FTN 1:4; Huber in Dassan. & Fosb.Rev.Handb. Fl.Ceylon 5:70. 1985. *Uvaria odorata* Lam. Encyl. 1:595. 1785.

Trees, up to 7 m tall. Leaves 10-26 x 4-6 cm, lanceate, apex acuminate. Flowers c. 5 cm across,very fragrant, pale yellow.

Occasionally cultivated in gardens. Fl.: December-April.

Flowers used by women to adorn hair.

Polyalthia Blume.

Flowers fascicled; leaves lanceate	.. .. .	<i>P. longifolia</i>
Flowers solitary; leaves elliptic	.. .. .	<i>P. suberosa.</i>

Polyalthia longifolia (Sonner.) Thw. Enum. Pl. Zeyl. 398. 1864; FBI 1:62; King in Ann. Roy. Bot. Gard. (Calcutta) 4:72. t.99. 1893; FPM 11; Mayur. 21; Sinclair in Gard. Bull. Straits Settlement. 14:322. 1955; FTN 1:6; Huber 32. *Uvaria longifolia* Sonner. Voy. Aux. Indes 2:233. t.131. 1782. *Guatteria longifolia* (Sonner.) Wall. ex Wight & Arn. Prodr. 10. 1834; Brown 4.

Trees, up to 12 m tall. Leaves 15-30 x 3-6 cm, undulate, base obtuse, apex acuminate. Flowers c. 2.5 cm across, greenish. Fruitlets up to 2.5 x 1.5 cm, subcylindric, 8-10 together, turning brownish and then purplish-black when ripe.

Commonly cultivated as an ornamental. Fl.: February - April. Fr. April-September. Tamil: Nettiilingam, Asoka. English: The Mast Tree.

Two cultivars are grown; one with short, pendulous branches and the other with long, ascending branches. Leaves often with an epiphytic alga, *Cephaleuros* sp. (brownish patches).

Polyalthia suberosa (Roxb.) Thw. Enum. Pl. Zeyl. 398. 1864; FBI 1:66; King 64.t.77 B; FPM 12; Sinclair 298; FTN 1:6; Huber. 41. Roxb. Pl. Cor. t.34. 1795. *Uvaria suberosa*.

Shrubs, up to 3 m tall. Leaves 5-10 x 2-3 cm, glabrous above, puberulous beneath. Flowers c. 1 cm across, leaf-opposed or lateral. Fruitlets c. 6 mm across, globose.

In hedges and thickets, Madhavaram very rare. Fl.: July-September. Fr.: September-November.

Fruitlets eaten by children when ripe.

Polyalthia korintii (Dunal) Thw. Enum. Pl. Zeyl. 398. 1864; FBI 1:64; King 79.t.110 A; FPM 11; Mayur. 22; FTN 1:6; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:36. 1985. *Guatteria korintii* Dunal, Monog. Anon. 133. 1817.

Mayuranathan records this from Vandalur hill.

Menispermaceae

1. Flowers 4-merous; petals connate	.. .. .	<i>Cissampelos</i>
1. Flowers 3-merous; petals distinct:		
2. Plants with watery latex and aerial roots	.. .. .	<i>Tinospora</i>
2. Plants without watery latex and aerial roots:		
3. Petals auricled at base:		
4. Sepals glabrous without	.. .. .	<i>Pachygone</i>
4. Sepals pubescent without	.. .. .	<i>Cocculus.</i>
3. Petals not auricled at base	.. .. .	<i>Tiliacora.</i>

Cissampelos L.

Cissampelos pareira L. var. **hirsuta** (Buch.-Ham. ex DC.) Forman in Kew Bull. 22:356. 1968; FTN 1:7. *C. hirsuta* Buch.-Ham. ex DC. Syst. 1:535. 1817. *C. pareira* L.:Sp.Pl. 1031. 1753 p.p.; FPM 21; Mayur 22.

Dioecious twiners. Leaves 3-8 x 3.5-8.5 cm. reniform, tomentose. Flowers c. 2 mm across, greenish, the staminate in dichasial cymes, pistillate fascicled in the axils of leafy bracts. Drupes c. 4 mm across, hirsute, red when ripe.

In scrub jungles; common. Fl.: August-November. Fr.: October-January. Tamil: Appatta.

Cocculus DC. (nom. cons.)

Cocculus hirsutus (L.) Diels in Engler, Pflanzenr. 46:236. 1910; FPM 21; Mayur. 23; FTN 1:7. *Menispermum hirsutum* L. Sp.Pl. 341. 1753. *Cocculus villosus* (Lam.) DC. Syst. 1:525. 1817; FBI 1:101. *Menispermum villosum* Lam. Encycl. 4:97. 1797.

Dioecious climbers. Leaves 5-7.5 x 3-5 cm, ovate or ovate-lanceate, sometimes 3-lobed, apex mucronate. Flowers c. 3 mm across, in short axillary panicles. Drupes purplish-black when ripe.

In scrub jungles; common. Fl.: January-March. Fr.: March-April.

Branches used for tying up bundles of fire-wood, grasses etc. Tamil. Kattukkodi.

Pachygone Miers

Pachygone ovata (Poir.) Miers ex Hook. f. & Thoms, Fl. Ind. 203. 1855; FBI 1:105; FPM 22; Mayur. 23; Forman in Kew Bull. 12: 457. 1957 & in Kew Bull. 22: 374. 1968; FTN 1:8. *Cissampelos ovata* Poir, in Lam. Encycl. 5:10. 1804.

Dioecious lianes. Leaves 4-8 x 3-6 cm, ovate, base truncate to subcordate, apex obtuse-mucronate. Flowers c. 3 mm across, pale yellow, often in paired axillary racemes. Drupes c. 1 cm, across.

In jungles and thickets; fairly common. Fl.: December- February, accompanied by leaf-fall. Fr.: March-July.

Tiliacora Coleb.

Tiliacora acuminata (Lam.) Hook. f. & Thoms. Fl. Ind. 187. 1855; FPM 20; Mayur 24; Forman in Kew Bull. 30:90. 1975; FTN 1:8. *Menispermum acuminatum* Lam. Encycl. 4:101. 1797. *Tiliacora racemosa* Coleb. in Trans. Linn. Soc. London 13:67. 1821; FBI 1:99.

Dioecious lianes. Leaves 7-10 x 5-6 cm, ovate-lanceate, base cordate to obtuse, apex acuminate. Flowers c. 5 mm across, yellow, in axillary thyrsoid panicles. Drupes c. 1 cm across, red when ripe.

In thickets and hedges; rare. Fl.: June-August. Fr.: August-November.

Tinospora Miers

Tinospora cordifolia (Willd.) Miers ex Hook.f. & Thoms. Fl. Ind. 184. 1855; FPM 19; Mayur. 23; Forman in Kew Bull. 36:403. 1981; FTN 1:8. *Menispermum cordifolium* Willd. Sp.Pl. 4:826. 1806. *Cocculus cordifolius* (Willd.) DC. Prodr. 1:97. 1824; Brown 5.

Dioecious climbers. Leaves 6-12 x 5-10 cm, cordate, apex acuminate. Flowers c. 6 mm across, pale yellow, fascicled on axillary peduncles, often cauliflorous. Drupes c. 1 cm across, red when ripe.

In jungles and thickets, often forming large canopy over trees. Fl.: February-April. Fr.: March-August. Tamil: Seenthil.

NELUMBONACEAE

Nelumbo Adans.

Nelumbo nucifera Gaertn. Fruct. 1:73. 1788; Subram. Aquat. Angiosp. 8. f.4. 1962; FTN 1:9. *Nelumbium speciosum* Willd. Sp.Pl. 2: 1258. 1799; Wood 247; FBI 1:116; FPM 24; Mayur. 25.

Aquatic herbs with underground creeping stem. Leaves 20-26 cm across, orbicular, waxy above, peltate. Flowers c. 10 cm across, pink or white with numerous floral parts. Fruitlets c. 15, sunk in the spongy obconic torus.

In fresh-water ponds; rare. Leaves lifted above the water surface. Fl. & Fr.: November-April.

Flowers showy and used by Hindus in worship. Leaves used as substitute for meal plates. Tamil: Thaamarai. English: The Lotus.

NYMPHAEACEAE

Nymphaea L.

Leaves glabrous beneath; anthers acute to acuminate at apex *N. nouchali*

Leaves pubescent beneath; anthers obtuse at apex *N. pubescens*

Nymphaea nouchali Burm.f. Fl. Ind. 120. 1768; FTN 1:9. *N. stellata* Willd. Sp.Pl. 2:1153. 1799; FBI 1:114; FPM 24; Mayur. 24; Subram. Aquat. Angiosp. 6. 1962.

Aquatic herbs with underground creeping stem. Leaves 10-18 cm across, suborbicular, base deeply cordate, margin entire to shallowly dentate. Flowers 6-8 cm across, pale blue or white, with numerous floral parts. Fruits 15-17-locular.

In fresh-water ponds and ditches, sometimes cultivated as an ornamental; common. Flowers open in the morning. Fl. & Fr.: November-April. Tamil: Alli. English: The Water Lily.

Nymphaea pubescens Willd. Sp. Pl. 2:1154. 1799; FPM 24; Mayur. 24; Royen in Nov. Guinea 10:107. 1962; FTN 1:9. *N. lotus* L. var. *pubescens* (Willd.) Hook. f. & Thoms. Fl. Ind. 241. 1855; FBI 1:114. *N. nouchali* auct. non Burm. f. 1768; Subram. 6.t.1.f.2.

Aquatic herbs with underground creeping stem. Leaves 16-22 cm across, suborbicular, base deeply cordate, margin dentate. Flowers 10-12 cm across, pink. Fruits c. 20-locular.

In fresh-water ponds and lakes, sometimes cultivated as an ornamental; common. Flowers open at night. Fl. & Fr.: October-March. Tamil: Alli. English: The Water Lily.

PAPAVERACEAE

Argemone L.

Argemone mexicana L. Sp. Pl. 508. 1753; FBI 1:117; FPM 25; Mayur. 25; Steenis in Steenis, Fl. Males. ser. 1.5:114. 1954; FTN 1:9.-Plate 1 A-G.

Prickly herbs with yellow latex, up to 1 m tall. Leaves up to 22 x 6.5 cm, the upper gradually smaller, pinnatifid. Flowers c. 4 cm across, yellow. Capsules c. 3 x 1 cm, prickly.

An annual weed of roadsides and waste places; rare. Seedlings appear around December-January and plants dry up around May-June. Fl. & Fr.: March-May. Tamil: Bamma thandu.

Leaves and flowers showy; may be cultivated in gardens as an ornamental. Native of tropical America.

BRASSICACEAE

(CRUCIFERAE)

Tap root tuberous; petals white to pale pink

.. ..

Raphanus

Tap root not tuberous; petals yellow

.. ..

Brassica

Brassica L.

Brassica juncea (L.) Czern. & Coss. in Czern. Consp. Pl. Chark. 8.n.5. 1859; FBI 1:157; FPM 28; Mayur. 26; Purseglove, TCD 90; FTN 1:11. *Sinapis juncea* L. Sp. Pl. 668. 1753.

Herbs. up to 1 m tall. Leaves up to 18 x 5 cm, radical and cauline, the basal larger and lyrate and the upper gradually smaller and entire. Flowers c. 1.2 cm across, in terminal panicles. Fruits up to 3 cm long.

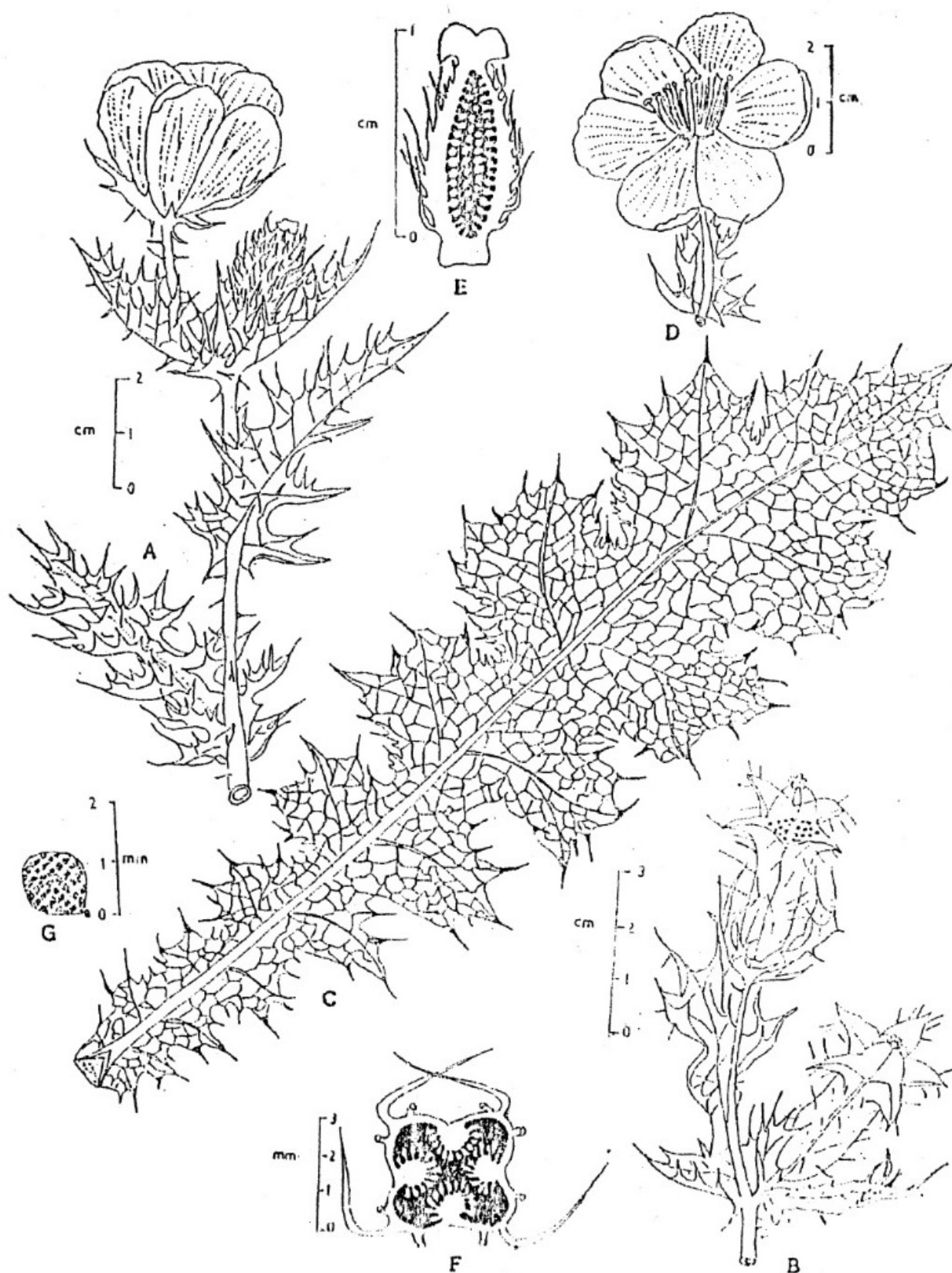


PLATE 1: *Argemone mexicana* L. A & B - Twigs with flower and fruits. C - Basal leaf. D - Flower. E - L.S. of gynoecium. F - C.S. of ovary. G - Seed.

Cultivated in fields, more often runs wild around houses; fairly common. Fl. & Fr.: January-April.

Seeds used in culinary preparations. Tamil: Kadugu. English: The Mustard.

Raphanus L.

Raphanus sativus L.Sp.Pl.669. 1753; Brown 7; FBI 1:166; FPM 28; Mayur. 26; Purselove, TCD 96; FTN 1:12.

Herbs, up to 12 m tall. Leaves up to 25 x 7 cm, radical and cauline, the basal larger and lyrate and the upper gradually smaller. Flowers c. 1.5 cm across, in compound corymbs. Fruits up to 3 cm long, indehiscent.

Commonly cultivated in fields. Fl. & Fr.: January-April.

Tuberous roots and leaves used as vegetable. Tamil: Mullangi. English: The Radish.

CAPPARACEAE

- | | | |
|--|---------|-----------------|
| 1. Plants with stipular spines | .. .. . | <i>Capparis</i> |
| 1. Plants without stipular spines: | | |
| 2. Shrubs or climbers; leaves simple: | | |
| 3. Stamens 4; fruits straight | .. .. . | <i>Cadaba</i> |
| 3. Stamens many; fruits irregularly curved | .. .. . | <i>Maerua</i> |
| 2. Trees; leaves 3-foliolate | .. .. . | <i>Crateva</i> |

Cadaba Forssk.

Cadaba fruticosa (L.) Druce in Bot. Exch. Club Soc. Brit. Isles 3:415. 1914; FTN 1:12. *Cleome fruticosa* L. Sp.Pl.671. 1753. *Cadaba indica* Lam. Encycl. 1:544. 1785; Brown 9; FBI 1:172; FPM 31; Mayur. 28.

Straggling or climbing shrubs. Leaves 2-8 x 1-4 cm, oblong-elliptic, glabrous. Flowers c. 1.7 cm across, pale white with a tubular disc. Fruits up to 4 cm long.

In scrub jungles and thickets; rare. Inflorescence glandular pubescent. Fl. & Fr.: throughout the year. Tamil: Vizhuthi.

Capparis L.

- | | | |
|--|---------|---------------------|
| 1. Flowers in umbels; berries purplish-black, under 1.5 cm across | .. .. . | <i>C.sepiaria</i> |
| 1. Flowers not in umbels; berries red, over 2 cm across: | | |
| 2. Flowers in supra-axillary rows; filaments white, turning pink later | .. .. . | <i>C. zeylanica</i> |
| 2. Flowers axillary, solitary; filaments always white | .. .. . | <i>C.brevispina</i> |

Capparis brevispina DC. Prodr. 1:246. 1824; FPM 32; Mayur. 29; Jacobs in Blumea 12:437. 1965; FTN 1:13. *C.zeylanica* auct. non L. 1762: FBI 1:174. p.p. - Plate 2 A.

Shrubs, up to 4 m tall, sometimes straggling. Leaves 5-8 x 3-4 cm, elliptic, glabrous. Flowers c. 4 cm across, white with yellow tinge at the base of the two upper petals which turn purplish later; stamens c.30. Berries irregularly fusiform.

In scrub jungles; fairly common. Fl.: January-March. Fr. March-July.

Capparis sepiaria L. Syst. Nat.ed. 10.2:1071. 1759; FBI 1:177; FPM 33; Mayur. 29; Jacobs 489; FTN 1:14.

Straggling or climbing shrubs. Leaves 3-6 x 2-4 cm, elliptical. Flowers c.1.2 cm across, pale white. Berries globose.

In scrub jungles and thickets; rare. Fl.: May-June. Fr.: July-September.

Capparis zeylanica L. Sp.Pl. ed. 2.720. 1762; FPM 33; Mayur 29; Jacobs 505; FTN 1:14. *C. horrida* L.f Suppl. Pl.264. 1781; Brown 9; FBI 1:178.-Plate 2 B.

Woody climbers. Leaves 4-10 x 2-5 cm, ovate-lanceate to elliptic, stellate-tomentose when young, glabrate when old. Flowers c. 4 cm across; stamens c. 70. Berries subglobose.

In scrub jungles and thickets; fairly common. Fl.: January- April. Fr.: March-July. Tamil: Aathandai.

Crateva L.

Crateva magna (Lour.) DC. Prodr. 1:243. 1824; Jacobs in Steenis, Fl. Males. ser.1.7:822. 1976 in addendum ; FTN 1:15. *Capparis magna* Lour. Fl. Cochinch. 1:331. 1790. *Crateva nurvala* Buch.-Ham. in Trans.Linn. Soc. London 15:121. 1827, "*Narvala*" Jacobs in Blumea 12:194. 1964. *C.religiosa* Forst. f. var. *nurvala* (Buch-Ham). Hook.f.& Thoms. in Hook.f.Fl.Brit. India 1:172.1872. *C.religiosa* auct. non Forst. f. 1786; FPM 34 p.p.; Mayur. 28.- Plate 2 C-D.



PLATE 2: A - Capparis brevispina DC. B -
 B - C. zeylanica L. C & D - Crateva magna (Lour.) DC.
 (inflorescence and C.S. of ovary).

Leaflets 8-12 x 4-6 cm, elliptic, apex acuminate. Flowers 3-5 cm across, greenish in bud, turning pale white and then pale yellow, in terminal corymbs; stamens 25-30. Berries subglobose.

Along roadsides, waste places and jungles; fairly common. Leaf-fall; February - March (before flowering). Fl.: February - April Fr.: March - October. Tamil: Maavilingam.

Maerua Forssk.

Maerua oblongifolia (Forssk.) A. Rich. in Guill. & Perr. Fl. Seneg. Tent. 1:32. t.5. 1831; FTN 1:15. *Capparis oblongifolia* Forssk. Fl. Aeg. Arab. 99. 1775. *Maerua arenaria* (DC.) Hook.f. & Thoms. in Hook.f. Fl. Brit. India 1:171. 1872; FPM 30; Mayur 29. *Niebuhreria arenaria* DC. Prodr. 1:244. 1824.-Plate 3 A-E.

Climbing shrubs. Leaves 3-7 x 2-4 cm, elliptic, glabrous. Flowers c. 4 cm across, greenish-white, solitary, axillary, also in racemes or corymbs. Berries somewhat moniliform.

In scrub jungles; rare. Fl. & Fr.: March-May.

CLEOMACEAE

Cleome L.

- | | | |
|---|---------|------------------------|
| 1. Leaves simple | .. .. . | <i>C. monophylla</i> |
| 1. Leaves palmately compound: | | |
| 2. Leaflets filiform | .. .. . | <i>C. angustifolia</i> |
| 2. Leaflets not filiform: | .. .. . |  |
| 3. Lower leaves 3 foliolate | .. .. . |  |
| 4. Petals pale yellow | .. .. . | <i>C. aspera</i> |
| 4. Petals purplish-violet | .. .. . | <i>C. burmannii</i> |
| 3. Lower leaves 5-9-foliolate | .. .. . |  |
| 5. Petals pink; lower leaves 5-9-foliolate | .. .. . | <i>C. chelidonii</i> |
| 5. Petals not pink; lower leaves 5-foliolate: | | |
| 6. Flowers with gynandrophore | .. .. . | <i>C. gynandra</i> |
| 6. Flowers without gynandrophore | .. .. . | <i>C. viscosa</i> |

Cleome angustifolia Forssk. Fl. Aeg. Arab 120. 1775; FTN 1:15 *C. tenella* L.f. Suppl. P1 300. 1781; FBI 1:169; FPM 29; Mayur. 28.

Diffuse herbs. Leaves 3-foliolate; leaflets 10-25 x 1-2 mm, glabrous. Flowers c. 3 mm across, yellow; stamens 6. Capsules c. 2-2.5cm long.

A weed of sandy seashores; fairly common. Fl. & Fr.: August-January.

Cleome aspera Koen. ex DC. Prodr. 1:241. 1824; Wood 248; FBI 1:169; FPM 29; Mayur. 28; Jacobs in Steenis, Fl. Males. ser. 1.6:105. 1960; FTN 1:15.

Prostrate herbs; stems with minute transparent prickles. Leaflets 10-20 x 5-8 mm, oblong-elliptic. Flowers c. 4 mm across, regular. Capsules 2-2.5 cm long.

An ephemeral weed of sandy fields, disturbed lands etc; fairly common. Fl. & Fr.: July-October.

Cleome burmannii Wight & Arn. Prodr. 22. 1834; FBI 1:170; FPM 29; FTN 1:15. — Plate 4 A-D.

Herbs, up to 70 cm tall; stems with minute transparent prickles. Leaflets 2.5-3.5 x 1-1.5 cm, obovate-elliptic. Flowers c. 1 cm across, zygomorphic. Capsules 3-4 cm long.

A weed of waste places; very rare. Fl. & Fr. November-February.

Cleome chelidonii L.f. Suppl. Pl. 300. 1781; FBI 1:170; FPM 29; Mayur. 28; Jacobs 102; FTN 1:15. *Polanisia chelidonii* (L.f.) DC. Prodr. 1:242. 1824; Brown 8.

Herbs, up to 40 cm tall; stems minutely prickly. Leaflets 2-5 x 1-2 cm, elliptic to oblanceate. Flowers c. 1.5 cm across, rosy-pink. Capsules 5-8 cm long.

A weed of rice fields and other marshy places; rare. Petiole apex and petiolules cream-coloured. Fl. & Fr.: July-December. Flowers showy; may be cultivated in gardens as an ornamental.

Cleome gynandra L. Sp. Pl. 671. 1753; 1 Itis in Brittonia 12: 283. 1960; Jacobs 101; FTN 1:16. *Gynandropsis pentaphylla* (L.) DC. Prodr. 1:238. 1824; Brown 8; FBI 1:171; FPM 29; Mayur. 27. *Cleome pentaphylla* L. Sp. Pl. ed. 2. 983. 1762.

Herbs, up to 70 cm tall; stems with minute, white prickles. Leaflets 2.5-5 x 1-2.5 cm, obovate. Flowers c. 1.3 cm across, pale white, in terminal racemes; bracts foliaceous, 3-foliolate. Capsules 5-8 cm long.

A weed of gardens, roadsides and waste places; fairly common. Fl. & Fr.: July-March.

Shoots used as green vegetable. Tamil: Vaelai keerai.

Cleome monophylla L. Sp. Pl. 672. 1753; Brown 8; FBI 1:168; FPM 29; Mayur. 27; FTN 1:16.

Herbs, up to 50 cm tall. Leaves 3-6 x 1-2 cm, lanceate. Flowers c. 1 cm across, *purplish-pink*. Capsules 5-10 cm long.

A weed of fallow fields and waste places; rare. Fl. & Fr.: August-February.

Cleome viscosa L. Sp. Pl. 672. 1753; FBI 1:170; FPM 29; Mayur. 27; Jacobs 103; FTN 1:16; FTN 1:16. *Polanisia icosandra* Wight & Arn. Prodr. 22. 1834; Brown 8.

Herbs, up to 70 cm tall. Leaflets 1-3 x 0.7-1.5 cm, obovate to elliptic. Flowers c. 1.5 cm across, axillary. Capsules 5-8 cm long.

A weed of roadsides, railway tracks, fallow fields and waste places; very common. Fl. & Fr.: July-March. Tamil: Naai vaelai.

VIOLACEAE

Hybanthus Jacq.

Hybanthus enneaspermus (L.) F.V. Muell. Fragm. Phyt. Austr. 10:81. 1876; Tennant in Kew Bull. 16:431. 1963; Jacobs & Moore in Steenis, Fl. Males. ser. 1:7:197. 1971; Grey Wilson

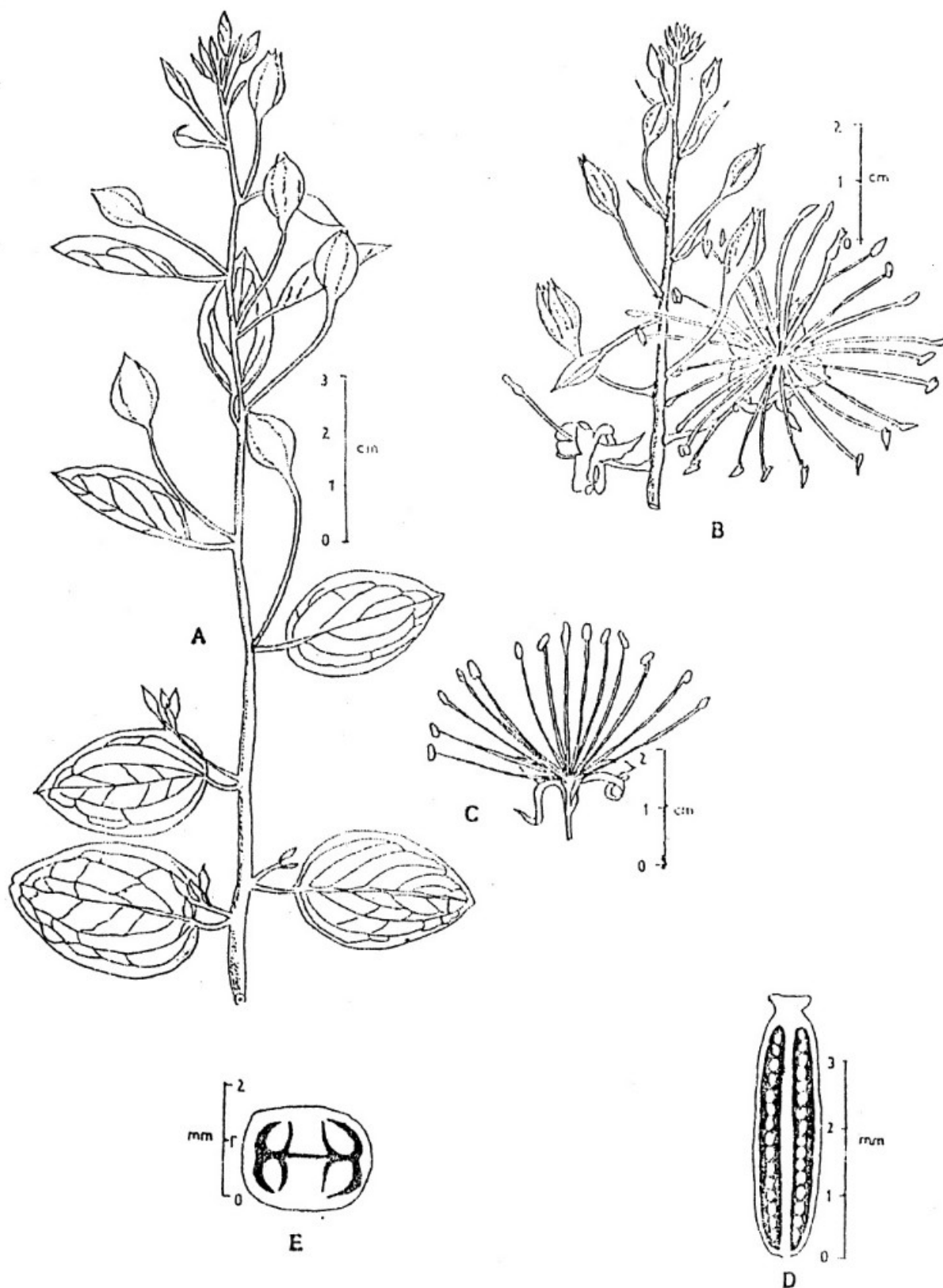


PLATE 3: *Maerua oblongifolia* (Forssk.) A. Rich.

A - Twig. B - Inflorescence. C - Flower.
 D - L.S. of gynoecium. E - C.S. of ovary.

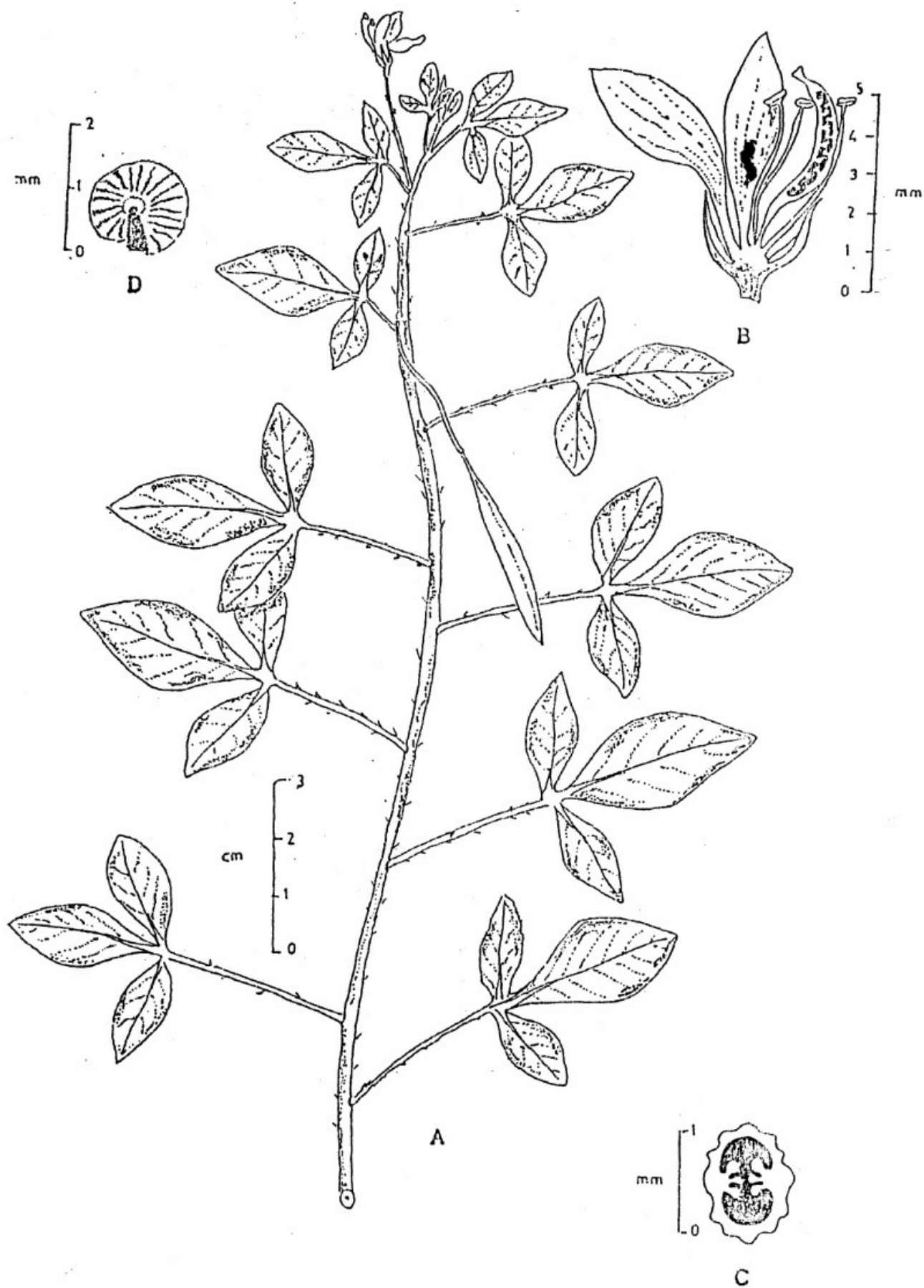


PLATE 4: *Cleome burmannii* Wight & Arn.
 A - Twig. B - L.S. of flower. C - C.S. of ovary.
 D - Seed.

in Kew Bull. 36:103. 1981; Banerjee & Pramanik, FFI 12:2. 1983; FTN 1:16. *Viola enneasperma* L. Sp.P1. 937. 1753. *Ionidium suffruticosum* (L.) Ging. in DC. Prodr. 1:311. 1824; Brown 11; FBI 1:185; FPM 35; Mayur. 30. *Viola suffruticosa* L. Sp.P1. 937. 1753.

Decumbent or erect herbs, up to 20 cm tall. Leaves 2-5 x 0.4-1 cm, linear to elliptic, entire or suberrate. Flowers c. 1 cm long, rosy purple; petals unequal, clawed. Capsules c. 4 mm across, 3-valved.

A weed of playgrounds, old walls etc; common. Fl. & Fr.: throughout the year.

Leaves eaten raw, for greater vigour. Tamil: Orilai thaamarai.

BIXACEAE

Bixa L.

Bixa orellana L. Sp. P1. 512. 1753; Brown 10; FBI 1:190; FPM 37; Mayur. 31; FTN 1:17; Dassan. in Dassan. & Fosb.Rev. Handb. Fl. Ceylon 5:121. 1985.

Shrubs or trees, up to 6 m tall. Leaves 10-15 x 8-10 cm, ovate. Flowers c. 1.5 cm across, pale pink, in terminal panicles. Capsules up to 4 x 3 cm, bristly, pink or yellow, 2-valved; seeds red.

Occasionally cultivated in gardens as an ornamental. Fl.: February-March. Fr.: March-July.

Fruits showy. The dye extracted from seed coat used for colouring cheese, butter etc. Tamil Jaaframaram. English. The Annatto. Native of South America and the West Indies.

FLACOURTIACEAE

Flacourtia Commers. ex L'Herit.

Flacourtia indica (Burm. f.) Merr. Interpr. Rumph. Herb. Amb. 377. 1917; Sleumer in Steenis, Fl. Males. ser. 1.5:76 1954; FTN 1:18. *Gmelina indica* Burm. f. Fl. Ind. 132. t. 39. f.5. 1768. *Flacourtia sepiaria* Roxb. P1. Cor.t. 68. 1795; FBI 1:194; FPM 39; Mayur. 30.

Dioecious shrubs, up to 4 m tall. Leaves 2-3.5 x 1-1.5 cm, elliptic to obovate, crenate to subentire. Flowers c. 4 mm across, pale yellow, in axillary fascicles, often on thorns. Drupes c. 6 mm across, globose.

In scrub jungles and thickets; common. Fl.: October-December. Fr.: November-March. Tamil: Sotthai kala.

POLYGALACEAE

Polygala L.

Caruncle appendages as long as seeds:

crest of keel rosy purple

.. ..

P. javana

Caruncle appendages minute or absent; crest

of keel yellow or pink

.. ..

P. arvensis

Polygala arvensis Willd. Sp. Pl. 3:876. 1802; Burt in Notes Roy. Bot. Gard. (Edinburgh) 32:404. 1973; Chandrabose & Nair in Proc. Indian Acad. Sci. (Plant Sci.) 90:110. 1981; FTN 1:20. *P. chinensis* auct. non L. 1753; FBI 1:204 p.p; FPM 42; Mayur. 31; Mukherjee in BBSB 12:38. 1958 p.p; Adema in Blumea 14:269. 1966.

Prostrate or erect herbs, up to 20 cm tall. Leaves 2-2.5 x 0.5-1 cm, obovate, elliptic or oblong. Flowers c. 5 mm across, yellow or pale pink, in leaf-opposed or lateral racemes, sometimes solitary and axillary. Capsules 2-valved.

A weed of playgrounds and waste places; common. Fl. & Fr.: August-February.

Polygala javana DC. Prodr. 1:327. 1824; FBI 1:201; FPM 42; Mukherjee 45; Adema 261; Chandrabose & Nair 112; FTN 1:21.

Ascending or erect herbs, up to 40 cm tall. Leaves 2-3 x 1-1.5 cm, obovate to elliptic. Flowers c. 8 mm across, pale yellow, in leaf-opposed or lateral racemes. Capsules 2-valved.

A weed of shady places near buildings; rare. Fl. & Fr. throughout the year.

Polygala rosmarinifolia Wight & Arn. Prodr. 37. 1834; FBI 1:204; FPM 42; Mayur. 31; Chandrabose & Nair 122; FTN 1:21.

Mayuranathan records this from Adayar.

CARYOPHYLLACEAE

Polycarpaea Lam.

Polycarpaea corymbosa (L.) Lam. Tabl. Encycl. 2:129. 1797; FBI 1:245; FPM 46; Mayur. 32; FTN 1:23. *Achyranthes corymbosa* L. Sp. Pl. 205. 1753.

Prostrate or erect herbs. Leaves 10-20 x 1-2 mm, opposite or falsely whorled, white-tomentose; stipules scarious. Flowers c. 3 mm across, whitish, in branched cymes; petals smaller than sepals. Capsules 3-valved.

A weed of open grounds, sandy or moist places; common. Fl. & Fr.: January-July.

PORTULACACEAE

Flowers solitary or in sessile clusters; capsules circumscissile	<i>Portulaca</i>
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Flowers in panicles; capsules not circumscissile	<i>Talinum</i>
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Portulaca L.

1. Leaves linear or subterete:

2. Flowers 2-3 cm across

.. .. . *P. pilosa* subsp. *grandiflora*

2. Flowers under 1.2 cm across:

- 3. Nodes glabrous; tap root tuberous *P. pilosa* subsp. *pilosa*
- 3. Nodes hairy; tap root not tuberous *P. suffruticosa*
- 1. Leaves neither linear nor subterete:
 - 4. Nodes with hairs or scales:
 - 5. Stems rooting at nodes; nodes with hairs *P. quadrifida*
 - 5. Stems not rooting at nodes; nodes with scales *P. wightiana*
 - 4. Nodes without hairs or scales *P. oleracea*

Portulaca oleracea L. Sp. Pl. 445. 1753; Brown 74; FBI 1:246; FPM 47; Mayur. 33; Geesink in Blumea 17:292. 1969 & in Steenis, Fl. Males. ser.1. 7:129. 1971; FTN 1:24.

Prostrate or erect, succulent herbs. Leaves 10-30 x 5-15 mm, obovate. Flowers c. 5 mm across, yellow. Capsules c. 4 mm across.

A weed of open grounds, railway tracks etc.; common. Fl. & Fr.: throughout the year.

Shoots used as green vegetable. Tamil: Pasalai.

Portulaca pilosa L. Sp. Pl. 445. 1753 subsp. *grandiflora* (Hook.) Geesink in Blumea 297 & in Steenis, Fl. Males. 131; FTN 1:24. *P. grandiflora* Hook. in Curtis, Bot. Mag.t. 2885. 1829; Brown 74.

Succulent herbs, rooting at lower nodes. Leaves 15-22 x 2-3 mm. Flowers rosy-purple or white, terminal; petals numerous. Capsules c. 4 mm across.

Cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year.

Two cultivars occur: the rosy-purple-flowered one very common, and white-flowered one rare.

Portulaca pilosa L. Sp. Pl. 445. 1753 subsp. *pilosa*; Geesink in Blumea 295 & in Steenis, Fl. Males. 131; FTN 1:24. *P. tuberosa* Roxb. Fl. Ind. 2:464. 1824; FBI 1:247; FPM 47; Mayur. 33.

Prostrate or erect, succulent herbs. Leaves 15-20 x 2-3 mm. Flowers c. 1 cm across, yellow. Capsules c. 4 mm across.

A weed of open grounds; common. Fl. & Fr.: July-October.

Portulaca quadrifida L. Syst. Nat.ed. 12.328. 1766 & Mant. Pl. 73. 1767; Brown 75; FBI 1:247; FPM 47; Mayur. 33; Geesink in Blumea 290 & in Steenis, Fl. Males. 127; FTN 1:25.

Prostrate herbs; stems filiform. Leaves 5-8 x 3-5 mm, opposite, ovate or ovate-lanceate. Flowers c. 5 mm across, yellow, solitary. Capsules c. 3 mm across.

A weed of gardens and moist places; common. Fl. & Fr.: July-December.

Portulaca suffruticosa Wight ex Wight & Arn. Prodr. 356. 1834; FBI 1:247; FPM 48; FTN 1:25. — Plate 5 A-B.

Prostrate or ascending, succulent herbs. Leaves 15-20 x 2-3 mm. Flowers c. 5 mm across, rosy purple. Capsules c. 3 mm across.

A weed of gardens and sandy seashores; fairly common. Fl. & Fr.: throughout the year.

Portulaca wightiana Wall. ex Wight & Arn. Prodr. 356. 1834; FBI 1:247; FPM 47; Barnes 10; FTN 1:25.

Prostrate, succulent herbs. Leaves 4-5 x 2-3 mm, ovate-lanceate; nodal scales as long as leaves, whorled. Flowers c. 4 mm across, yellow. Capsules c. 3 mm across.

A weed of sandy and rocky places; rare. Fl. & Fr.: January-April.

Talinum Adans.

Talinum triangulare Willd. Sp.P1. 2:862. 1799; Subramaniam & Chandrasekaran in Madras Agri. J. 40:51. 1953; FTN 1:25. — Plate 5 C.

Succulent undershrubs, up to 60 cm tall. Leaves 5-10 x 1.5-3.5 cm, spatulate-elliptic. Flowers c. 2 cm across, rosy-purple. Capsules c. 6 mm across.

Commonly cultivated in kitchen gardens, also runs wild. Fl. & Fr.: throughout the year.

Flowers very showy. Leaves used as green vegetable. Easily propagated by cuttings. Tamil: Ceylon pasalai.

ELATINACEAE

Bergia L.

Sepals and petals 3 each

.. .. . *B. ammannioides*

Sepals and petals 5 each

.. .. . *B. capensis*

Bergia ammannioides Roxb. Hort. Beng. 34. 1814, "*ammanoides*"; FBI 1:251; FPM 50; Backer in Steenis, Fl. Males. ser. I. 4:205. 1951; Sohmer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:426. 1980; FTN 1:26.

Prostrate or erect herbs; branches up to 20 cm long. Leaves 15-25 x 5-8 mm, obovate-elliptic. Flowers c. 2 mm across, reddish. Capsules obscurely 4-5 - lobed.

A weed of moist places, drying ditches and lakes, also on river sand; fairly common. Fl. & Fr.: December-April.

The plant superficially resembles species of *Ammannia*, but careful examination reveals the differences.

Bergia capensis L.Mant.Alt. 241. 1771; FPM 49; Mayur. 34; Backer 213; Sohmer 425; FTN 1:26. *B. verticillata* Willd. Sp. P1. 2:770. 1799; FBI 1:252.

Erect or ascending herbs, up to 50 cm tall. Leaves 2-4 x 0.8-1.2 cm, oblanceate-elliptic. Flowers c. 2.5 mm across, pinkish-white. Capsules c. 2 mm across.

A semiaquatic weed of ditches; common. Stems with prominent air chambers within. Fl. & Fr.: December-March.

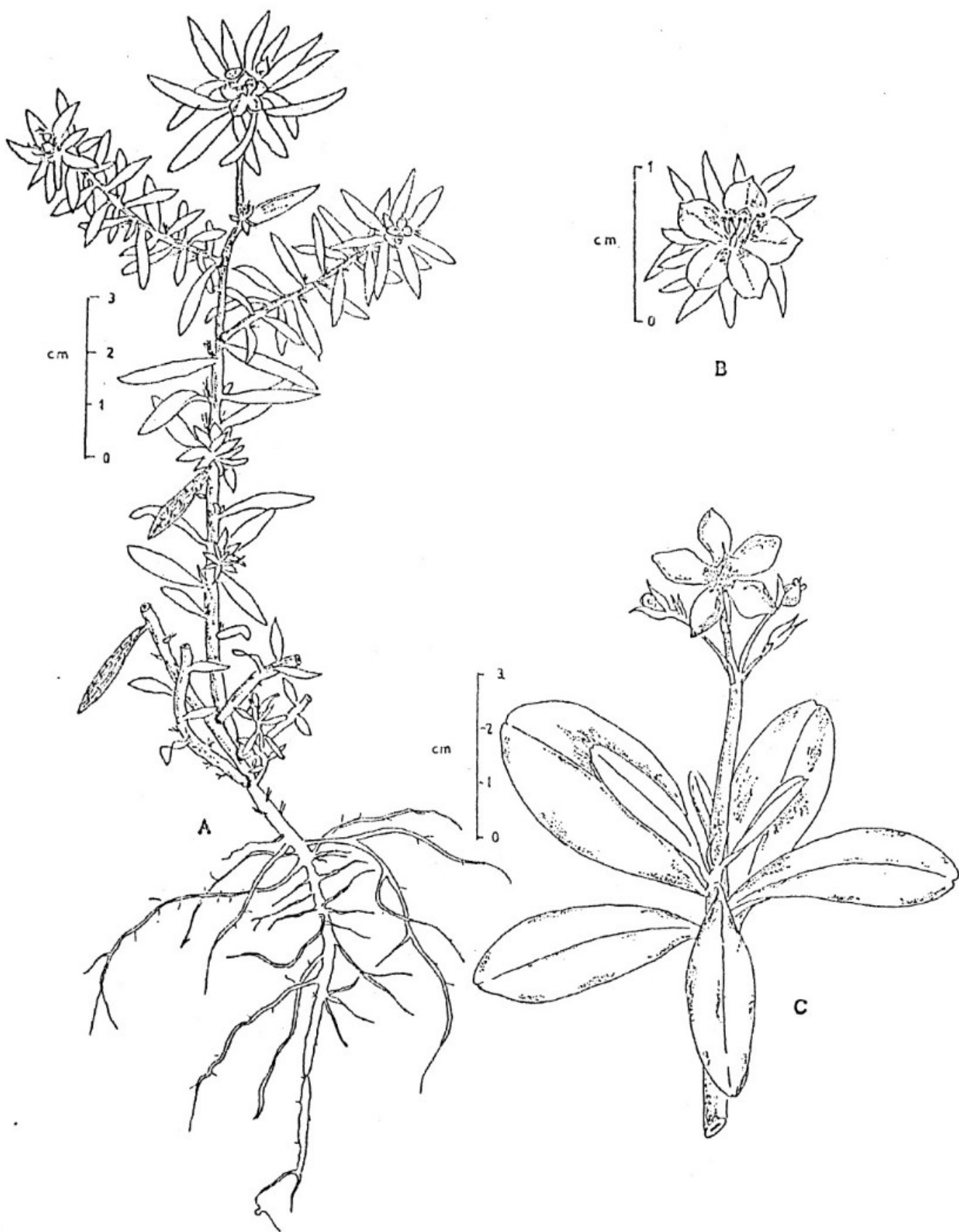


PLATE 5: A & B - *Portulaca suffruticosa* Wight ex Wight & Arn.
(habit and flower). C - *Talinum triangulare* Willd.

Elatine L.

Elatine ambigua Wight in Bot. Misc. 2. Suppl.: 103.t.5.1831; FPI 1:251; FPM 49; Mayur. 34; FTN 1:26.

Mayuranathan records this.

CLUSIACEAE**(GUTTIFERAE)****Calophyllum L.**

Calophyllum inophyllum L. Sp.Pl. 513. 1753; Brown 25; FBI 1:273; FPM 55; Mayur. 35; Maheshwari in BBSI 2:145. 1960; Kosterm. in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:90 1980; FTN 1:27.

Trees, up to 12 m tall. Leaves 8-12 x 4-7 cm, obovate-oblong, with close parallel latera veins. Flowers c. 2.5 cm across, white, in axillary racemes. Drupes c. 3 cm across.

Occasionally cultivated in gardens and avenues. Fl. & Fr.: March-October. Tamil: Punnai. English: Alexandrian Laurel.

MALVACEAE

1. Styles branched:

2. Styler branches as many as locules:

3. Epicalyx present (caducous in *Abelmoschus ficulneus*):

4. Ovary 3-5-locular:

5. Calyx persistent

.. .. .

Hibiscus

5. Calyx caducous

.. .. .

Abelmoschus

4. Ovary more than 10-locular

.. .. .

Malvastrum

3. Epicalyx absent:

6. Ovules and seeds one in each locule

.. .. .

Sida

6. Ovules and seeds 2 or 3 in each locule

.. .. .

Abutilon

2. Styler branches twice the number of locules:

7. Petals under 3 cm long:

8. Flowers in heads

.. .. .

Malachra

8. Flowers not in heads:

9. Fruits glochidiate

.. .. .

Urena

9. Fruits not glochidiate

.. .. .

Pavonia

7. Petals over 4 cm long

.. .. .

Malvaviscus

1. Styles unbranched:

10. Epicalyx persistent; seeds comose

.. .. .

Gossypium

10. Epicalyx caducous; seeds glabrous

.. .. .

Thespesia

Abelmoschus Medik.

Petals yellow with purplish base	.. .. .	<i>A. esculentus</i>
Petals white to pale pink	.. .. .	<i>A. ficulneus</i>

Abelmoschus esculentus (L.) Moench. Meth. Pl. 617. 1794; Brown 16; Borss. in Blumea 14:100. 1966; FTN 1:31. *Hibiscus esculentus* L. Sp. Pl. 696. 1753; FBI 1:343; FPM 71; Mayur. 44.

Undershrubs, up to 1.5 m tall. Leaves 5-25 x 6-28 cm, the upper gradually smaller, palmately 3-5-lobed. Flowers c. 4 cm across. Capsules up to 16 cm long.

Commonly cultivated in fields and kitchen gardens. Fl. & Fr.: throughout the year.

Young fruits used as vegetable. Tamil: Vendai. English: Lady's Finger.

Abelmoschus ficulneus (L.) Wight & Arn. in Wight, Cat. 14. 1833; Brown 16; Borss. 101; FTN 1:31. *Hibiscus ficulneus* L. Sp. Pl. 695. 1753; FBI 1:340; FPM 69; Mayur. 42.

Undershrubs with spreading branches, sparsely prickly. Leaves 3-6 x 4-7 cm, 3-5-lobed. Flowers c. 4 cm across. Capsules up to 5 cm long.

A weed of rice fields; rare. Fl. & Fr.: December-March.

Abutilon Mill.

1. Pericarps membranous	.. .. .	<i>A. crispum</i>
1. Pericarps coriaceous:		
2. Stems with long hairs amidst short hairs	.. .. .	<i>A. hirtum</i>
2. Stems with only short hairs throughout	.. .. .	<i>A. indicum</i>

Abutilon crispum (L.) Medik. Malv. 29. 1787; FBI 1:327; FPM 66; Mayur. 39; Borss. in Blumea 14:161. 1966; FTN 1:32. *Sida crispa* L. Sp. Pl. 685. 1753.

Erect or suberect herbs, up to 60 cm tall. Leaves 3-6 x 2.5-5 cm, cordate. Flowers c. 1 cm across, yellow. Fruits globose, inflated; mericarps c. 10, obtuse at apex.

A weed of shady places along river banks and backwaters; rare. Fl. & Fr.: December-April. Tamil: Siruthutthi.

Abutilon hirtum (Lam.) Sweet, Hort. Brit. ed. 1.53. 1826; FPM 65; Mayur. 39; Borss. 168; FTN 1:32. *Sida hirta* Lam. Encycl. 1:7. 1783. *Abutilon graveolens* (Roxb. ex Hornem.) Wight & Arn. var. *hirtum* (Lam.) Mast. in Hook. f. Fl. Brit. India 1:327. 1874.

Undershrubs, up to 1.5 m tall. Leaves 4-10 x 3-8 cm, orbicular-cordate. Flowers c. 2.5 cm across, yellow. Fruits depressed above; mericarps 18-20, mucronate at apex.

A weed along railway tracks and roadsides; fairly common. Fl. & Fr.: September-April.

Abutilon indicum (L.) Sweet, Hort. Brit. ed. 1.54. 1826; Wood 251; FBI 1:326; FPM 65; Borss. 171; FTN 1:32. *Sida indica* L. in Torner, Cent. Pl. 2:26. 1756.

Undershrubs, up to 2 m tall. Leaves 3-10 x 2.5-9 cm, cordate, apex acuminate. Flowers c. 2 cm across, yellow. Fruits depressed above; mericarps 20-24, mucronate at apex.

A weed of waste places; common. Fl. & Fr.: throughout the year. Tamil: Thutthi.

Gossypium L.

Corolla purplish-red	.. .. .	<i>G. arboreum</i>
Corolla yellow with purple centre	.. .. .	<i>G. barbadense</i>

Gossypium arboreum L.Sp.Pl. 693. 1753, *emend.* Hutchinson *et al.* Evol. Goss. 32.t.4. 1947; FBI 1:347; FPM 73; Mayur. 45; Borss. in Blumea 14:121. 1966; FTN 1:33.

Shrubs, up to 4 m tall. Leaves 6-9 x 5-7 cm, palmately 5-7-parted. Flowers c. 4 cm across; bracteoles entire or slightly incised. Capsules ovoid.

Occasionally cultivated around houses. Fl. & Fr.: June - September.

The cotton fibre obtained from seed coat used in textiles. Tamil: Parutthi. English: The cotton. Native of tropical America.

Gossypium barbadense L. Sp.Pl.693. 1753, *emend* Hutchinson *et al* Evol. Goss. 48. 1947; Brown 16; FBI 1:347; FPM 73; Mayur. 46; Borss. 127; FTN 1:33.

Shrubs, up to 4 m tall. Leaves 10-14 x 8-12 cm, 3-5-parted, dotted with black spots, base cordate. Flowers c. 4 cm across, bracteoles laciniate. Capsules ovoid.

Occasionally cultivated around houses. Fl. & Fr.: October-February. Tamil: Seemai parutthi. English: The cotton. Native of tropical America.

Hibiscus L.

1. Leaves palmately lobed or angled:

2. Capsules winged *H. vitifolius*

2. Capsules not winged:

3. Leaves glandular beneath the midrib at base:

4. Calyx glabrous, reddish - purple *H. sabdariffa*

4. Calyx hairy, greenish-white *H. cannabinus*

3. Leaves not glandular beneath the midrib at base:

5. Corolla yellow with purplish centre:

6. Twigs prickly; bracteoles forked *H. surattensis*

6. Twigs not prickly; bracteoles not forked *H. panduriformis*

5. Corolla whitish *H. lobatus*

1. Leaves not palmately lobed or angled:

7. Trees *H. tiliaceus*

7. Herbs, undershrubs or shrubs:

8. Staminal tube under 3 cm long:
 9. Corolla white *H. ovalifolius*
 9. Corolla pink *H. hirtus*
 8. Staminal tube over 5 cm long:
 10. Flowers pendant; petals dissected *H. schizopetalus*
 10. Flowers not pendent; petals not dissected *H. rosa-sinensis*

Hibiscus cannabinus L. Syst.Nat.ed. 10.1149. 1759; Brown 15; FBI 1:339; FPM 71; Mayur. 44; Borss. in Blumea 14:63. 1966; FTN 1:34.

Undershrubs, up to 2 m tall. Leaves 6-10 x 5-8 cm, 3-5- parted, rarely simple. Flowers c. 4 cm across, yellow with purplish centre. Capsules up to 1.8 x 1.5 cm.

Occasionally cultivated around houses and in fields. Fl. & Fr.: throughout the year.

Leaves used as greens. Tamil: Pulichaikeerai. English: The Deccan Hemp.

Hibiscus hirtus L.Sp.P1.694. 1753; FBI 1:335; FPM 70; Borss. 75; FTN 1:34.

Undershrubs, up to 2 m tall; stems wiry. Leaves 4-6 x 3-4 cm, ovate, serrate. Flowers c. 2 cm across. Capsules subglobose.

Occasionally cultivated in gardens as an ornamental, also runs wild. Fl. & Fr.: throughout the year.

Hibiscus lobatus (Murr.) Kuntze, Rev. Gen. Pl. 3:19. 1898; Borss. 77; FTN 1:34. *Solandra lobata* Murr. in Commentat Soc. Regiae Sci. Gott. 6:20. t.1. 1785. *Hibiscus solandra* L'Herit. Strip. Nov. 1:103.t.49. 1789; FBI 1:336; FPM 70; Mayur.43.

Herbs, up to 80 cm tall. Leaves 3-5 x 1-3 cm, the lower orbicular-ovate, the middle 3-lobed and the upper lanceate. Flowers c. 1.5 cm across. Capsules ovoid.

A weed of waste places; rare. Fl. & Fr.: November-March.

Hibiscus ovalifolius (Forssk.) Vahl, Symb. Bot. 1:50. 1790; FTN 1:34. *Urena ovalifolia* Forssk. Fl. Aeg.-Arab.124. 1775. *Hibiscus micranthus* L.f. Suppl.Pl.308. 1781; FBI 1:335; FPM 70; Mayur. 42; Rakshit & Kundu in BBSI 12:171. 1972.

Undershrubs, up to 2 m tall; stems wiry. Leaves 2-5 x 1.5-3.5 cm, orbicular-ovate, crenate-dentate. Flowers c. 1.5 cm across; petals usually reflexed. Capsules subglobose.

In thickets and scrub jungles; fairly common. Fl. & Fr.: March-September.

Hibiscus panduriformis Burm. f.Fl.Ind.151.t.47.f.2. 1768; FBI 1:338 "*panduraeformis*"; FPM 70; Mayur. 43; Borss. 79; Rakshit & Kundu 172; FTN 1:34.

Undershrubs, up to 1 m tall. Leaves 3-6 x 2-5 cm, 5-lobed or 5-angled, crenate-serrate. Flowers c. 2.5 cm across, pale yellow. Capsules ovoid.

A weed of railway tracks and other waste places; rare. Fl. & Fr.: November - March.

Hibiscus rosa-sinensis L.Sp.Pl.694. 1753; Brown 14; FBI 1:344; FPM 71; Mayur. 45; Borss. 72; FTN 1:34.

Shrubs, up to 5 m tall. Leaves 6-14 x 3.5-10 cm, ovate, margin serrate, apex acuminate. Flowers c. 8 cm across, usually red; petals 5 or many; ovary 5 - locular.

Commonly cultivated in gardens as an ornamental. Fl.: throughout the year. Tamil: Chemparuthi. English: The shoe flower. Native of China and Northern India.

Hibiscus sabdariffa L.Sp.Pl. 695. 1753; Brown 15; FBI 1:340; FPM 71; Mayur. 45; Borss. 64; FTN 1:35.

Undershrubs, up to 1 m tall. Leaves 6-9 x 5-7 cm, 3-5-lobed. Flowers c. 4 cm across, pale yellow with purplish centre; calyx succulent. Capsules up to 2 x 1.5 cm.

Occasionally cultivated in kitchen gardens. Fl. & Fr.: October-March.

Calyx made into pickles. Tamil: Pulicha Keerai. English: The Roselle. Native of the West Indies.

Hibiscus schizopetalus (Mast.) Hook.f. in Curtis, Bot. Mag.t.6524. 1880; Borss. 3; FTN 1:35. *H. rosa-sinensis* L. var. *schizopetalus* Mast. in Gard. Chron.n.s. 12:272. f.45. 1879.

Shrubs, up to 4 m tall; branches pendant. Leaves 4-8 x 2-5 cm, ovate, serrate. Flowers c. 6 cm across, reddish; petals reflexed.

Commonly cultivated in gardens as an ornamental. Fl.: throughout the year.

Hibiscus surattensis L.Sp.Pl.696. 1753; Brown 14; FBI 1:334; FPM 70; Borss. 57; FTN 1:35.

Rambling undershrubs. Leaves 4-7 x 3.5-6 cm, 3-5-lobed; lobes linear-lanceate, serrate. Flowers c. 4 cm across, yellow with purplish centre. Capsules ovoid.

In thickets along bunds of lakes; rare. Fl. & Fr.: November - April.

Petals have a strong yellow dye; may be useful for dye industries. Tamil: Kattu pulichai.

Hibiscus tiliaceus L.Sp.Pl.694. 1753; FBI 1:343; FPM 70; Mayur. 43; Borss. 30; FTN 1:35.

Leaves 8-12 x 8.5-13 cm, suborbicular, tomentose beneath, apex acuminate. Flowers c. 5 cm across, yellow with purplish centre. Capsules ovoid, woody.

Along seashores, sometimes cultivated as an avenue tree; fairly common. Fl. & Fr.: throughout the year. Tamil: Neer Parutthi.

Hibiscus vitifolius L.Sp.Pl. 696. 1753; FBI 1:338; FPM 70; Mayur. 43; Rakshit & Kundu 166; Borss. 82; FTN 1:35.

Undershrubs, up to 1.5 m tall. Leaves 4-8 x 3-7 cm, the lower 3-5-lobed and the upper merely angled, serrate. Flowers c. 4 cm across, yellow with purplish centre. Capsules up to 1.7 x 2.2 cm.

A weed along railway tracks and roadsides; fairly common. Fl. & Fr.: January - September.

Flowers showy; may be cultivated in gardens as an ornamental.

Hibiscus syriacus L.Sp.Pl.695. 1753; Brown 15; FBI 1:344; FPM 71; Mayur. 45; Borss. 75; FTN 1:35.

Mayuranathan records this as "grown in gardens".

Hibiscus trionum L.Sp.Pl. 697. 1753; FBI 1:334; FPM 70; Mayur. 44; Rakshit & Kundu 168; FTN 1:35.

Mayuranathan records this.

Malachra L

Malachra capitata (L.) L.Syst. Nat.ed. 12.2.458. 1767; FBI 1:329; FPM 73; Mayur. 40; Borss. in Blumea 14: 146. 1966; FTN 1:35. *Sida capitata* L. Sp.Pl.685. 1753.

Undershrubs, up to 2 m tall; stems stellate-bristly. Leaves 5-10 x 6-11 cm, orbicular-ovate, palmately 3-5-lobed or angled. Flowers c. 1 cm across, yellow; bracteoles foliaceous. Fruit splitting into 5 mericarps.

A weed along river bank, ditches and rice fields; rare. Stem strongly fibrous. Fl. & Fr.: November March. Native of tropical America.

Malvastrum A. Gray

Malvastrum coromandelianum (L.) Garcke in Bonplandia 5:297. 1857; FPM 64; Mayur. 36; Borss. in Blumea 14:152. 1966; FTN 1:36. *Malva coromandeliana* L.Sp.Pl. 687. 1753. *Malvastrum tricuspidatum* (R. Br.) A. Gray, Pl. Wright. 1:16. 1852; FBI 1:321. *Malva tricuspidata* R.Br. in Ait. Hort. Kew. ed.2. 4:210. 1812.

Herbs, up to 60 cm tall. Leaves 3-6 x 2-4 cm, ovate-lanceate, serrate. Flowers c. 1.2. cm across, pale yellow; bracteoles 3. Mericarps awned at apex and with paired hooks along the middle.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Malvaviscus Fabricius

Malvaviscus arboreus Dillen ex Cav. Diss. 3:131.t.48. f.I. 1787; Borss. in Blumea 14:133. 1966; FTN 1:36.

Shrubs, up to 2.5 m tall. Leaves 7-12 x 4-7 cm, ovate-elliptic, rarely shallowly lobed, dentate, apex acuminate. Flowers up to 7 cm long, red or pink; petals remaining closed, twisted.

Occasionally cultivated in gardens as an ornamental. Fl.: throughout the year.

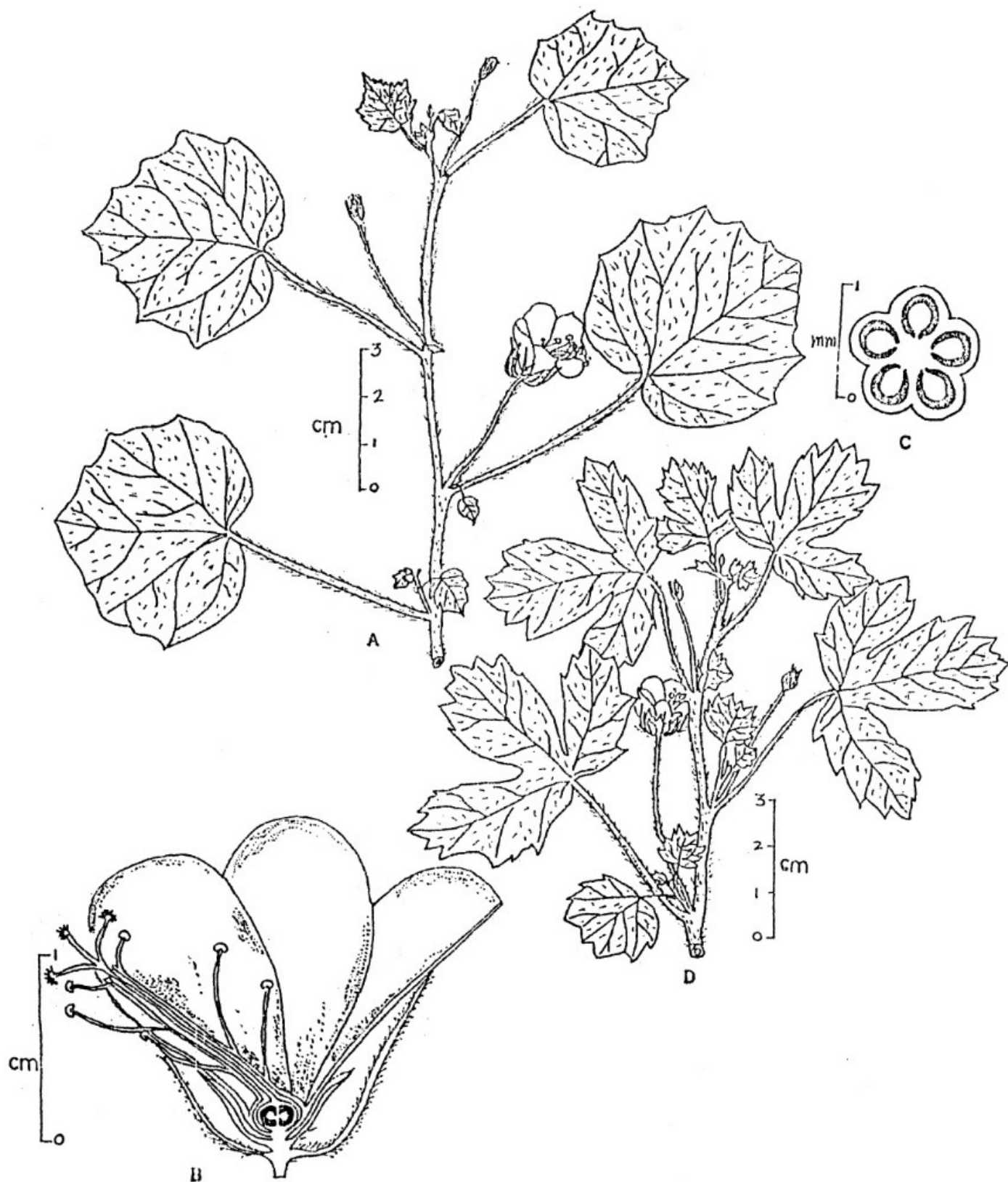


PLATE 6: A, B & C - *Pavonia odorata* Willd. (twig,
L.S. of flower and C.S. of ovary).
D - *P. zeylanica* (L.) Cav.

Pavonia Cav.

- | | | |
|--|---------|----------------------|
| 1. Bracteoles 5, ovate | .. .. . | <i>P. procumbens</i> |
| 1. Bracteoles 8 or more, setaceous: | | |
| 2. Leaves of main stem deeply parted | .. .. . | <i>P. zeylanica</i> |
| 2. Leaves of main stem shallowly lobed or merely dentate | .. .. . | <i>P. odorata</i> |

Pavonia odorata Willd. Sp.Pl. 3:837. 1800; Wood 250; FBI 1:331; FPM 67; Mayur. 41; FTN 1:36. - Plate 6 A-C.

Herbs, up to 50 cm tall. Leaves 3-5 x 2.8-4.5 cm, orbicular-ovate. Flowers c. 1.5 cm across, pink to pale white. Fruits splitting into 5 mericarps.

A weed of roadsides and waste places; common. Fl. & Fr. : throughout the year.

Pavonia procumbens (Wall.ex Wight & Arn.) Walp. Rep. 1:301. 1842 non Casaretto 1842; FPM 67; Mayur.41; Borss. in Blumea 14:135. 1966; FTN 1:36. *Lebretonia procumbens* Wall.ex Wight & Arn. Prodr.47. 1834. *Lebretonia glechomifolia* (A.Rich.) Garcke ex Schweinf. Beitr.Fl.Aethiop.1:54. 1867; FBI 1:330. *P. coxii* Tad. & Jacob in J.Indian Bot.Soc.5:11. 1926.

Spreading herbs. Leaves 2-4 x 2.2-4.5 cm, orbicular-ovate, shallowly 3-lobed or slightly angled. Flowers c. 1.5 cm across, yellow. Fruits of 5 mericarps.

A weed along bunds of lakes and barren lands; rare. Fl. & Fr.: throughout the year.

Pavonia zeylanica (L.) Cav. Diss. 3:134. 1787; FBI 1:331; FPM 67; Mayur. 41; FTN 1:36. *Hibiscus zeylanicus* L.Sp.Pl. 697. 1753. - Plate 6 D.

Herbs, up to 1 m tall. Leaves 2.2-4.5 x 2-4 cm; lobes narrowed at base. Flowers c. 1.3 cm across, pink. Fruits splitting into 5 mericarps.

A weed of roadsides and waste places; fairly common. Fl. & Fr.: throughout the year.

Sida L.

- | | | |
|--|---------|-----------------------|
| 1. Leaves entire, emarginate at apex | .. .. . | <i>S. cuneifolia</i> |
| 1. Leaves toothed, not emarginate at Apex: | | |
| 2. Ovaries 5-locular: | | |
| 3. Leaves cordate | .. .. . | <i>S. cordata</i> |
| 3. Leaves other than cordate | .. .. . | <i>S. spinosa</i> |
| 2. Ovaries 6-10-locular: | | |
| 4. Leaves cordate to ovate | .. .. . | <i>S. cordifolia</i> |
| 4. Leaves other than cordate to ovate: | | |
| 5. Ovaries 6 (7)-locular | .. .. . | <i>S. acuta</i> |
| 5. Ovaries 10-locular | .. .. . | <i>S. rhombifolia</i> |

Sida acuta Burm.f.Fl.Ind.147. 1768, emend. Schum. in Mart. Fl.Bras.12(3): 326. 1891; FPM 64; Mayur. 38; Borss. in Blumea 14:186. 1966; FTN 1:36. *S. carpinifolia* auct. non L.f. 1781; FBI 1:323. - Plate 7A.

Undershrubs, up to 70 cm tall. Leaves 3-7 x 1-5 cm, the lower rhomboid-elliptic and the upper lanceate or linear, glabrescent. Flowers c. 1.3 cm across, yellow. Mericarps as long as the calyx, 2-awned at apex.

A weed of waste places; common. Fl. & Fr.: throughout the year. Tamil: Ariva mookku keera.

Sida cordata (Burm.f.) Borss. in Blumea 14:182. 1966; FTN 1:36. *Melochia cordata* Burm.f. Fl. Ind. 143. 1768. *Sida veronicifolia* Lam. Encycl. 1:5. 1783; FPM 64; Mayur. 37. *S. humilis* Cav. Diss. 5:277. 1788; FBI 1:322. - Plate 7 B.

Prostrate herbs. Leaves 2-5 x 1-3 cm, apex acuminate. Flowers c. 1 cm across, yellow; calyx lobes villous at apex. Mericarps shorter than calyx, 2-awned at apex.

A weed of shady places; common. Fl. & Fr.: August - February. Tamil: Pazham paasi.

Sida cordifolia L. Sp. Pl. 684. 1753; Wood 252; FBI 1:324; FPM 64; Mayur. 37; Borss. 199; FTN 1:36.

Undershrubs, up to 80 cm tall. Leaves 2-4 x 1-3 cm, densely tomentose. Flowers c. 1.2 cm across, yellow; ovary 10-locular. Mericarps longer than calyx, 2-awned at apex, awns retrorsely scabrid.

A weed of waste places, also along sandy seashores; common. Fl. & Fr.: throughout the year.

Sida cuneifolia Roxb. Fl. Ind. 3:170. 1832. *S. schimperiana* Hochst. in A. Rich. Tent. Fl. Abyss. 1:66. 1847; FBI 1:322; FPM 64; Mayur. 38; FTN 1:37. - Plate 7 C.

Spreading undershrubs. Leaves 6-12 x 4-6 mm, obovate, base cuneate; stipules caducous. Flowers c. 1.2 cm across, yellow; ovary 5-locular. Mericarps shorter than calyx, beaked at apex, beak bidentate.

A weed of waste places, sometimes in thickets; rare. Fl. & Fr.: throughout the year.

Sida rhombifolia L. Sp. Pl. 684: 1753, emend. Mast. in Hook. f. Fl. Brit. India 1:323. 1874; FPM 65; Mayur. 38; Borss. 193; FTN 1:37. *S. rhomboidea* Roxb. ex Fleming in Asiat. Res. 6:178. 1810; FPM 65; Mayur. 38.

Ascending or erect undershrubs, up to 70 cm tall. Leaves 2-6 x 1-4 cm, rhomboid-elliptic to lanceate-elliptic, often purple-tinged, base cuneate. Flowers c. 2 cm across, yellow. Mericarps 7-10, shorter than calyx, minutely beaked at apex.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Sida spinosa L. Sp. Pl. 683. 1753; FBI 1:323; FPM 64; Mayur. 37; Borss. 191; FTN 1:37.

Undershrubs, up to 1 m tall. Leaves 1.5-3 x 1-2.5 cm, oblong-elliptic or obovate; stipules thickened at base. Flowers c. 1 cm across, yellow; pedicels 2-3 mm long in flowers and up to 1 cm in fruit. Mericarps as long as calyx, 2-awned at apex.

A weed of waste places; rare. Fl. & Fr.: September-February. Tamil: Arivaal manai poondu.

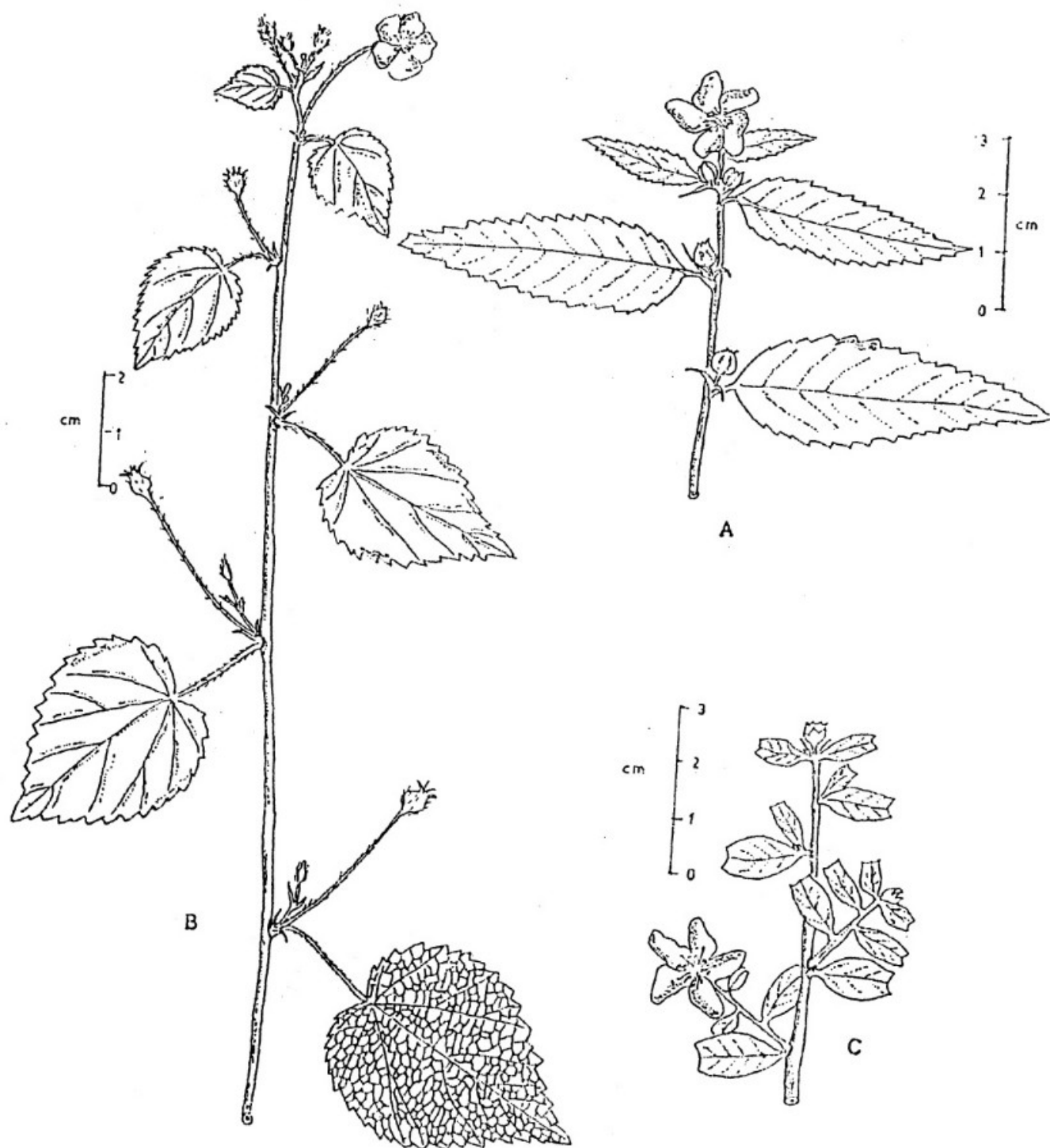


PLATE 7: A - *Sida acuta* Burm.f. B - *S. cordata* (Burm.f.)
 Borss. C - *S. cuneifolia* Roxb.

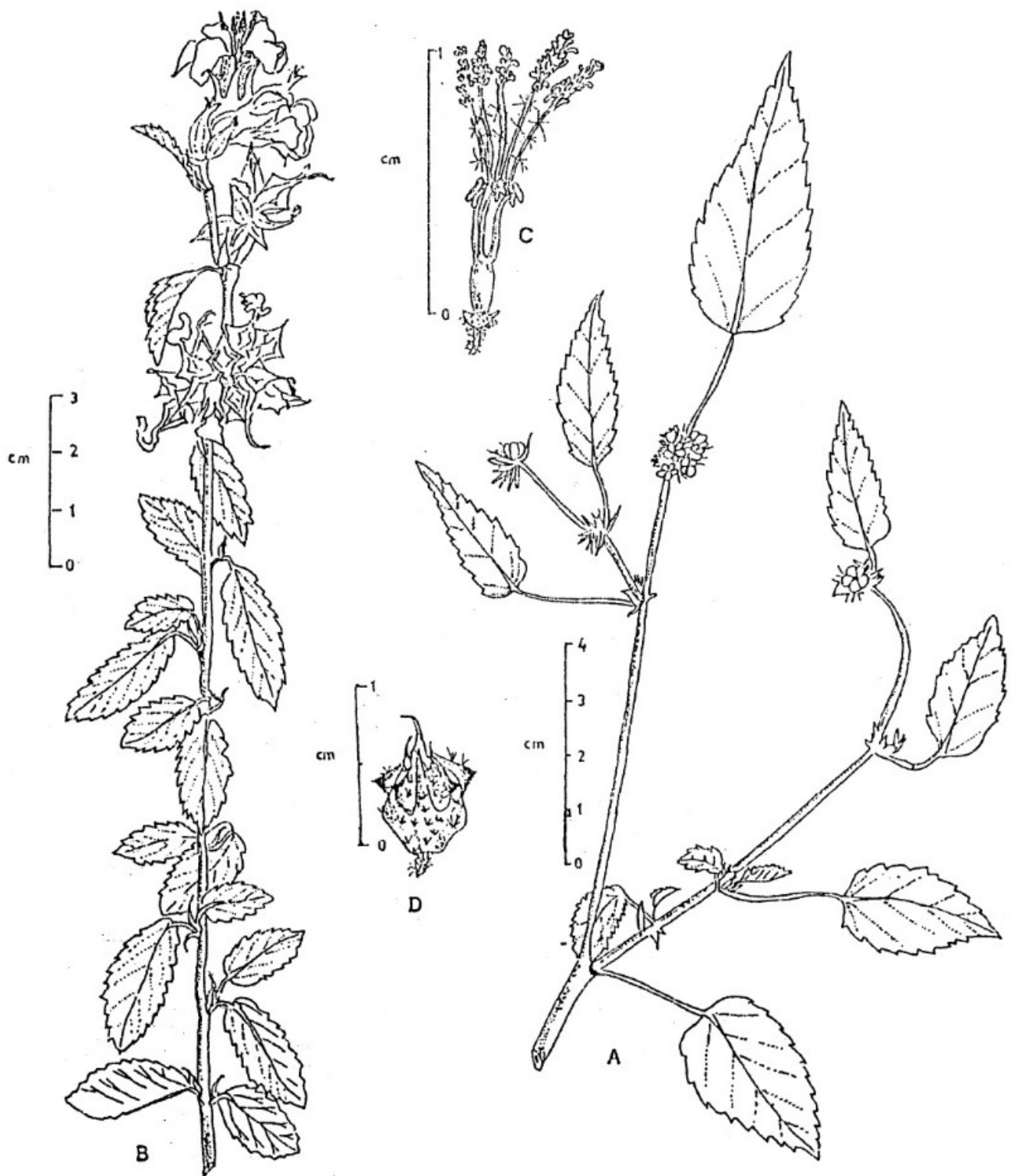


PLATE 8: A - *Melochia corchorifolia* L.
 B, C & D - *M. pyramidata* L. (twig, androecium & gynoecium and fruit).

Thespesia Soland. ex Correa (nom. cons.)

Thespesia populnea (L.) Soland. ex Correa in Ann. Mus. Natl. Hist. Nat. 9:290. t.8.f.1. 1807; Brown 16; FBI 1:345 p.p.; FPM 72; Mayur. 46; Borss. in Blumea 14:106. 1966; Fosb. & Sachet in Smithsonian Contr. Bot. 7:8. 1972; FTN 1:37. *Hibiscus populneus* L. Sp.Pl.694. 1753.

Trees, up to 10 m tall. Leaves 8-13 x 6-10 cm, cordate, with peltate scales, apex acuminate. Flowers c. 6 cm across, yellow with purplish centre; stigma clavate. Capsules indehiscent.

Along river banks and seashores, also cultivated as avenue tree; common. Fl. & Fr.: throughout the year.

Timber valuable for making handicrafts, furniture etc. Tamil: Poovarasu.

Urena L.

Urena lobata L. subsp. **sinuata** (L.) Borss. in Blumea 14:142. 1966; FTN 1:37 *U. sinuata* L. Sp.Pl.692. 1753; FBI 1:329; FPM 66; Mayur. 40.

Undershrubs, up to 2 m tall. Leaves 4-7 x 4.5-8 cm, palmately-parted, lobes narrowed at base. Flowers c. 1.5 cm across, pink. Fruit of 5 mericarps.

A weed along the sides of canals and rice fields; rare. Fl. & Fr.: October-April.

Flowers showy; may be cultivated in gardens as ornamental.

Urena lobata L. Sp.Pl.692. 1753 subsp. **lobata**; Brown 13; FBI 1:329; FPM 66; Mayur. 40; Borss. in Blumea 14:140. 1966; FTN 1:37.

Brown and Mayuranathan record this.

BOMBACACEAE

1. Flowers red	.. ..	<i>Bombax</i>
1. Flowers white:		
2. Fruits with cottony fibres within	.. ..	<i>Ceiba</i>
2. Fruits without cottony fibres within	.. ..	<i>Adansonia</i>

Adansonia L.

Adansonia digitata L.Sp.Pl.1190. 1753; Brown 17; FBI 1:348; FPM 73; Mayur. 46; Robyns in Dassan. & Fosb.Rev.Handb. Fl.Ceylon 1:67. 1980; FTN 1:37.

Deciduous trees with massive trunk, up to 15 m tall. Leaves digitately compound; leaflets 8-12 x 3-4cm, oblanceate-elliptic. Flowers c. 10 cm across, pendulous. Fruits up to 22 x 12 cm, woody, indehiscent.

Occasionally cultivated in parks and avenues. Fl.: December-February. Fr.: February-August. Tamil: Aanaippuliya maram. English: The Baobab Tree. Native of Africa.

Bombax L.

Bombax ceiba L.Sp.Pl. 511. 1753; Robyns in Taxon 10:157. 1961; Bull. Jard. Bot. Flat. 33:88. 1963 & in Dassan. & Fosb. Rev.Handb. Fl.Ceylon 1:64. 1980; FTN 1:38. *B. malabaricum* DC. Prodr. 1:479. 1824; FBI 1:349; FPM 71; Mayur. 47.

Deciduous trees, up to 15 m tall; trunk prickly. Leaves digitately compound; leaflets 6-10 x 2-4 cm, lanceate-elliptic. Flowers c. 12 cm across; petals succulent. Capsules oblong.

Along roadsides and waste places; rare. Fl. & Fr.: April-July. Tamil: Elavu. English: The Red Silk-Cotton Tree.

Ceiba Mill.

Ceiba pentandra (L.) Gaertn. Fruct. 2:244.t. 133. 1791; Purseglove, TCD 34; Robyns in Dassan. & Fosb. Rev.Handb.Fl. Ceylon 1:70. 1980; FTN 1:38. *Bombax pentandrum* L.Sp.Pl.511. 1753. *Eriodendron anfractuosum* DC. Prodr. 1:479. 1824; Brown 18; FBI 1:350. *E. pentandrum* (L.) Kurz in J. Asiat. Soc. Bengal 43:113. 1874; FPM 72; Mayur. 47.

Deciduous trees, up to 15 m tall. Leaves digitately 7-foliolate; leaflets 5-20 x 2-7 cm, oblanceate to narrowly elliptic. Flowers c. 3.5 cm across. Capsules up to 20 x 5 cm, subcylindric.

Commonly cultivated around houses. Fl.: February-March. Fr.: March-May.

Fibres of fruits used for stuffing pillows, mattresses etc. Tamil: Elavam panju maram. English: The White Silk-Cotton Tree.

STERCULIACEAE

- | | | |
|--|---------|---------------------|
| 1. Petals 5: | | |
| 2. Petals with elongate apical process | .. .. . | <i>Guazuma</i> |
| 2. Petals without elongate apical processes: | | |
| 3. Gynandrophore present: | | |
| 4. Carpels spirally twisted in fruit | .. .. . | <i>Helicteres</i> |
| 4. Carpels not spirally twisted in fruit | .. .. . | <i>Pterospermum</i> |
| 3. Gynandrophore absent: | | |
| 5. Staminodes present | .. .. . | <i>Pentapetes</i> |
| 5. Staminodes absent: | | |
| 6. Ovaries 5-locular | .. .. . | <i>Melochia</i> |
| 6. Ovaries 1-locular | .. .. . | <i>Waltheria</i> |
| 1. Petals 0 | .. .. . | <i>Sterculia</i> |

Guazuma Mill.

Guazuma ulmifolia Lam. Encycl. 3:52. 1789; Robyns in Ann. Missouri Bot. Gard. 51:102. 1964; FTN 1:39. *G. tomentosa* HBK.Nov.Gen.Sp. 5:320. 1823; Brown 19; FBI 1:375; FPM 79; Mayur. 50.

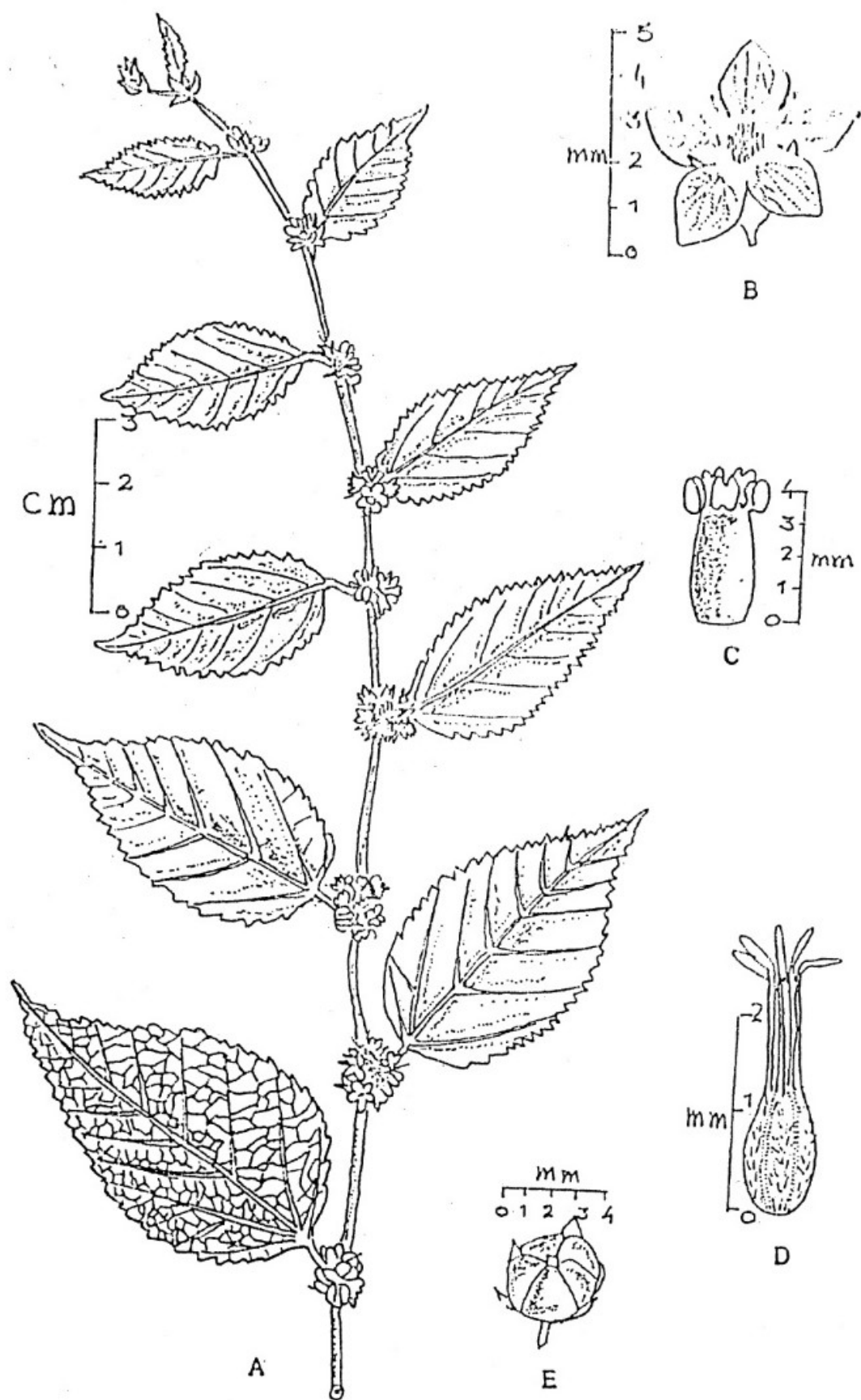


PLATE 9: *Melochia nodiflora* Sw. A - Twig. B - Flower.
C - Androecium. D - Gynoecium. E - Fruit.

Trees, up to 12 m tall. Leaves 6-12 x 3-5 cm, ovate-lanceate, base oblique. Flowers c. 6 mm across, in axillary cymes. Fruits up to 2.3 x 1.8 cm, woody, tubercled.

Occasionally cultivated as avenue tree, sometimes runs wild. Fl. & Fr.: throughout the year. Tamil: Thaen Maram. Native of tropical America.

Helicteres L.

Helicteres isora L. Sp.Pl.963. 1753; FBI 1:365; FPM 77; Mayur. 48; FTN 1:39.

Shrubs, up to 5 m tall. Leaves 6-10 x 5-8 cm, obovate to suborbicular, base oblique. Flowers c. 2.5 cm across, brick-red turning pale violet, in axillary cymes. Fruits up to 5 x 1 cm.

In scrub jungles; rare. Fl.: November-January. Fr.: January-April. Tamil: Valampiri.

Melochia L.

- | | | |
|--|---------|-------------------------|
| 1. Capsules 5-winged | .. .. . | <i>M. pyramidata</i> |
| 1. Capsules not winged: | | |
| 2. Flowers always in axillary clusters | .. .. . | <i>M. nodiflora</i> |
| 2. Flowers in axillary and terminal clusters | .. .. . | <i>M. corchorifolia</i> |

Melochia corchorifolia L. Sp.Pl.675. 1753; FBI 1:374; FPM 79; Mayur. 49; Goldberg in Contrib. U.S.Natl. Herb. 34: 304. 1967; FTN 1:40. - Plate 8 A.

Herbs, up to 50 cm tall. Leaves 2-6 x 0.8-4 cm, the lower often obscurely 3-lobed and the upper ovate-lanceate. Flowers c. 7 mm across, pale pink, in capitate cymes. Capsules c. 5 mm across, subglobose.

A weed of rice fields; common. Fl. & Fr.: throughout the year.

Melochia nodiflora Sw. Prodr. 97. 1788; Mayur. 49; Goldberg 271; Sree Kumar & Nair in JBNHS 78:424. 1981; FTN 1: Addenda page 1.-Plate 9 A-E.

Undershrubs, up to 2 m tall. Leaves 5-10 x 2.5-6 cm, lanceate-ovate or ovate, margin dentate-crenate. Flowers c. 7 mm across, pale pink. Capsules c. 5 mm across, subglobose.

A weed of waste places; rare. Fl. & Fr.: November-April. Native of Central America and the West Indies.

Melochia pyramidata L. Sp.Pl.674. 1753; FBI 1:374; Goldberg 337. - Plate 8 B-D.

Undershrubs, up to 1.5 m tall. Leaves 2-3 x 1-1.5 cm, oblong-elliptic, tomentose. Flowers c. 1.2 cm across, pale white, in leaf-opposed cymes. Capsules c. 6 mm long.

A weed of gardens and roadsides, Nungambakkam; rare. Fl. & Fr.: throughout the year. Native of tropical America.

Pentapetes L.

Pentapetes phoenicea L. Sp. Pl. 698. 1753; Brown 20; FBI 1:371; FPM 81; Mayur. 50; FTN 1:40.

Herbs, up to 70 cm tall. Leaves 8-10 x 1-1.5 cm, linear-lanceate, serrate. Flowers c. 2.5 cm across, red with white centre. Capsules ovoid.

A weed of rice fields, ditches and shallow pools; rare. Fl. & Fr.: November-March. Native of northern India.

Pterospermum Schreber (nom. cons.)

Pterospermum canescens Roxb. Fl. Ind. 3:162. 1832; FTN 1:40. *P. suberifolium* (L.) Lam. Tabl. Encycl. 3:136. t. 576. f. 2. 1823 non Willd. 1800; Brown 21; FBI 1:367; FPM 78; Mayur. 49. *Pentapetes suberifolia* L. Sp. Pl. 698. 1753.

Trees, up to 10 m tall. Leaves 6-9 x 3-7 cm, obovate, white-tomentose beneath, distally dentate. Flowers c. 3 cm across, white, in axillary cymes. Capsules 5-valved.

Occasionally cultivated in parks and avenues; rare. Fl.: April-June. Fr.: May-September.

Sterculia L.

Sterculia foetida L. Sp. Pl. 1008. 1753; Brown 18; FBI 1:354; FPM 75; Mayur. 48; Tantra, Lembaga Penelitian Hutan 102:44. 1976; FTN 1:41.

Trees, up to 12 m tall. Leaves digitately 5-6-foliolate; leaflets 8-15 x 3-5 cm, narrowly elliptic. Flowers c. 2 cm across, purplish, in axillary panicles. Follicles up to 10 x 11 cm, reddish.

Commonly cultivated in gardens and avenues. Fl.: March-April. Fr.: April-September.

Follicles sometimes used as ash tray. Tamil: Peenaari.

Waltheria L.

Waltheria indica L. Sp. Pl. 673. 1753; FBI 1:374; FPM 79; Mayur. 50; FTN 1:42.

Undershrubs, up to 1 m tall. Leaves 3-5 x 1-3 cm, ovate, tomentose. Flowers c. 5 mm across, yellow, in axillary clusters. Capsules c. 2 mm across, 1-seeded.

A weed of roadsides and other waste places; common. Fl. & Fr.: throughout the year.

TILIACEAE

1. Trees or shrubs:

2. Fruits winged; petals longer than sepals

.. ..

Berrya

2. Fruits not winged; petals shorter than sepals

.. ..

Grewia

1. Herbs or undershrubs:

3. Fruits bristly	.. ..	<i>Triumfetta</i>
3. Fruits not bristly	.. ..	<i>Corchorus</i>

Berrya Roxb.

Berrya cordifolia (Willd.) Burret in Notizbl. Bot. Gart. Berlin - Dahlem 9:606. 1926, "Berria"; FTN 1:42. *Espera cordifolia* Willd. in Ges. Naturf. Freunde Berlin Neue Schriften 3:450. 1801. *Berrya ammonilla* Roxb. Fl. Ind. 2:639. 1824; Brown 22; FBI 1:383; FPM 87; Mayur. 51.

Trees, up to 12 m tall. Leaves 12-15 x 8-10 cm, ovate, base cordate. Flowers c. 1 cm across, in terminal panicles. Fruits c. 2.5 cm across.

Occasionally cultivated in gardens and avenues. Fl.: February-April. Fr.: April-June.

Timber valuable for making furniture and handicrafts. Tamil: Thirigona malai maram. English: The Trincomalee Wood. Native of Sri Lanka.

Corchorus L.

1. Fruits winged along the angles	.. ..	<i>C. aestuans</i>
1. Fruits not winged:		
2. Fruits 3-fid at apex	.. ..	<i>C. tridens</i>
2. Fruits not 3-fid at apex:		
3. Fruits straight, pointed at apex:		
4. Fruits under 2.5 cm long	.. ..	<i>C. fascicularis</i>
4. Fruits over 3 cm long	.. ..	<i>C. olitorius</i>
3. Fruits curved, not pointed at apex	.. ..	<i>C. urticifolius</i>

Corchorus aestuans L. Syst. Nat. ed. 10. 1079. 1759; FTN 1:42. *C. acutangulus* Lam. Encycl. 2:104. 1786; Brown 21; FBI 1:398; FPM 86; Mayur. 54; Chakrav. in BBSB 5:82. 1951.

Prostrate or suberect herbs. Leaves 3-6 x 2-3 cm, ovate, serrate, the lowest serration sometimes prolonged backwards. Flowers c. 8 mm across, yellow. Capsules up to 2 x 0.5 cm.

A weed of waysides and waste places; common. Fl. & Fr.: August-December.

Corchorus fascicularis Lam. Encycl. 2:104. 1786; FBI 1:398; FPM 87; Mayur. 54; Chakrav. 79; FTN 1:42.

Erect or ascending herbs, up to 40 cm tall. Leaves 4-6 x 1-1.5 cm, lanceate. Flowers c. 4 mm across, yellow. Capsules up to 2 cm long, white-tomentose.

A weed of moist places like rice fields; rare. Fl. & Fr.: November-March.

Corchorus olitorius L. Sp. Pl. 529. 1753; FBI 1:397; FPM 87; Mayur. 54; Chakrav. 77; FTN 1:43.

Undershrubs, up to 1 m tall. Leaves 5-9 x 2-3 cm, elliptic-lanceate or ovate-lanceate, serrate, the lowest serration prolonged backwards. Flowers c. 1 cm across, yellow. Capsules up to 7 cm long, 10-ribbed, glabrous.

A weed of rice fields and moist places; common. Fl. & Fr.: October-April.

Stem strongly fibrous, used in jute industries. Tamil: Sanal.

Corchorus tridens L. Mant. Alt. 566. 1771; FBI 1:398; FPM 87; Chakrav. 81; FTN 1:43.

Suberect herbs, up to 60 cm tall. Leaves 4-7 x 1-2 cm, ovate-lanceate. Flowers c. 7 mm across, yellow. Capsules up to 5.5 cm long.

A weed of waste places; rare. Fl. & Fr.: October-February.

Corchorus urticifolius Wight & Arn. Prodr. 73. 1834, "*urticaefolius*"; FBI 1:397; FPM 87; Chakrav. 79; FTN 1:43.

Erect or ascending herbs, up to 50 cm tall. Leaves 3-6 x 2-3 cm, ovate, denticulate. Flowers c. 5 mm across, yellow. Capsules up to 3 cm long.

A weed of waste places; rare. Fl. & Fr.: November-March.

Grewia L.

1. Flowers dull white:

2. Leaves lanceate, tomentose

.. ..

G. hirsuta

2. Leaves ovate-elliptic or obovate-elliptic, glabrescent

.. ..

G. orientalis

1. Flowers bright yellow

.. ..

G. orbiculata

Grewia hirsuta Vahl, Symb. Bot. 1:34. 1790; FBI 1:391; FPM 85; Burrett in Notizbl. Bot. Gart. Berlin-Dahlem 9:709. 1926; Mayur. 53; FTN 1:44.

Shrubs, up to 2 m tall; young stems hirsute. Leaves 5-10 x 2-3 cm, 3-4-veined at base. Flowers c. 1.5 cm across; peduncles 2-4 per leaf axil. Drupes c. 7 mm across, yellowish-brown when ripe.

In scrub jungles and thickets; common. Fl.: March-September. Fr.: August-November.

Grewia orbiculata Rottl. in Ges. Naturf. Freunde Berlin Neue Schriften 4:205. 1803; FBI 1:386; Burrett 650; FTN 1:44. *G. rotundifolia* Juss. in Ann. Mus. Natl. Hist. Nat. 4:92. 1804; FPM 84; Barnes 10.

Deciduous shrubs or trees, up to 6 m tall; bark ash-coloured, fissured. Leaves 5-10 x 4-7 cm, orbicular-ovate or obovate-elliptic. Flowers c. 1.2 cm across, in simple, axillary cymes. Fruits c. 6 mm across, hirsute, purplish brown.

In scrub jungles; common. Leaves often show galls. Fl.: March-May. Fr.: April-July.

Ripe fruits eaten by children and also by birds. Tamil: Pulippum Inippum pazham.

Grewia orientalis L. Sp.Pl.964. 1753; FPM 84; Mayur. 52; FTN 1:44. *G. columnaris* Smith in Rees, Cyclop. 17:5. 1811; FBI 1:383.

Straggling shrubs or lianes. Leaves 5-8 x 2.5-4 cm. Flowers c. 2 cm across, in axillary cymes; sepals up to 2.5 cm long. Drupes up to 2 cm across, pale yellow when ripe.

In scrub jungles; common. Fl. & Fr.: throughout the year, in successive waves.

Grewia glabra Blume, Bijdr. 115. 1825; FTN 1:43. *G. disperma* auct. non Rottl. ex Spreng. 1825; FPM 84; Mayur. 52. *G. laevigata* auct. non Vahl 1790; FBI 1:389.

Mayuranathan records this from Vandalur.

Grewia obtusa Wall. ex Dunn in Gamble & Fischer, Fl. Pres. Madras 117. 1915 & 83. 1957 (repr. ed.); Mayur. 52; FTN 1:44. *G. bracteata* auct. non Heyne ex Roth 1821; FBI 1:389 p.p.

Mayuranathan records this from Ennur and Avadi.

Grewia villosa Willd. in Ges. Naturf. Freunde Berlin Neue Schriften 4:205. 1803; FBI 1:388; FPM 85; Mayur. 52; FTN 1:45.

Mayuranathan records this from Vandalur.

Triumfetta L.

1. Lower leaves 3-5-lobed or angled:

2. Fruits globose

.. ..

T. rhomboidea

2. Fruits ovoid

.. ..

T. pentandra

1. Lower leaves not lobed or angled

.. ..

T. rotundifolia

Triumfetta pentandra A.Rich. in Guill & Perr. Fl. Seneg. Tent. 93.t.19. 1831; FPM 86; Mayur. 53; FTN 1:45. *T. neglecta* Wight & Arn. Prodr. 75. 1834; FBI 1:396. *T. rhomboidea* Jacq. var. *pentandra* (A.Rich.) Ellis in BBSI 24:209. 1982.

Undershrubs, up to 40 cm tall. Leaves 2-3.5 x 1.5-3 cm, rhomboid to elliptic, serrate, apex acuminate. Flowers c. 3 mm across, in leaf-opposed fascicles; stamens c. 6. Capsules c. 5.5 x 4.5 mm; bristles directed forwards, stiff-hairy.

A weed of rocky, open grounds amidst scrub jungles, particularly along hill-slopes; rare. Fl. & Fr.: January-April.

Triumfetta rhomboidea Jacq. Enum. Carib. 22. 1760; FBI 1:395; FPM 86; Mayur. 53; Raiz. in Indian Forester 92:325. 1966; FTN 1:45. *T. angulata* Lam. Encycl. 3:41. 1789; Brown 21.

Undershrubs, up to 1.5 m tall. Leaves 3-5 x 4-6 cm, the upper gradually reduced and lanceate. Flowers c. 1 cm across, yellow, in leaf-opposed fascicles; stamens c. 10. Capsules c. 6 mm across; bristles directed outwards, glabrous.

A weed of waysides and waste places; often locally abundant. Flowers open in the afternoon. Fl. & Fr.: December-March.

Stem strongly fibrous. Tamil: Paeraamutti.

Triumfetta rotundifolia Lam. Encycl. 3:421. 1792; FBI 1:395; FPM 86; Mayur. 53; FTN 1:46.

Undershrubs, up to 80 cm tall. Leaves 1.5-2.5 x 1.6-2 cm, suborbicular, biserrate. Flowers c. 7 mm across, yellow, in bract-opposed fascicles on branchlets; stamens c. 20. Capsules c. 6 mm across.

A weed along bunds of rice fields, lakes etc.; rare. Flowers open in the afternoon. Fl. & Fr.: December-March.

ELAEOCARPACEAE

Muntingia L.

Muntingia calabura L. Sp.Pl.509. 1753; FTN 1:47.

Shrubs or trees, up to 6 m tall. Leaves 9-12 x 3-5 cm, ovate-lanceate or lanceate, stellate-tomentose. Flowers c. 2.5 cm across, white, 2-3 together, in supra-axillary fascicles; ovary 5-7-locular, with numerous, minute ovules on pendulous placentae. Berries c. 1.2 cm across, orange-yellow when ripe.

Occasionally cultivated around houses, also runs wild. Fl. & Fr.: throughout the year.

Berries edible. English: Singapore Cherry.

LINACEAE

Hugonia L.

Hugonia mystax L. Sp.Pl.675. 1753; FBI 1:413; FPM 90; Mayur. 55; Hajra, FFI 13:6. 1983; FTN 1:47.

Straggling shrubs or lianes; bark greyish-white, longitudinally fissured; old stems thorny; young branchlets with hooks in the axils of the lower 1-3 leaves. Leaves 5-9 x 2-4 cm, obovate-oblanate. Flowers c. 3 cm across, yellow, axillary. Drupes c. 1.2 cm across, red when ripe.

In scrub jungles; very common. Fl.: June-August. Fr.: August-November. Tamil: Mothira kanni.

Linum L.

Linum usitatissimum L. Sp.Pl.277. 1753; FBI 1:410; FPM 89; Mayur. 55; Hajra, FFI 13:12. 1983; FTN 1:47.

Mayuranathan records this as a "weed of waste places".

MALPIGHIACEAE

Hiptage Gaertn.

Hiptage benghalensis (L.) Kurz in J.Asiat. Soc. Bengal 43:136. 1874; Jacobs in Steenis, Fl. Males. ser. 1.5:132. 1955; FTN 1:48. *Banisteria benghalensis* L. Sp.Pl.427. 1753. *Hiptage madablota* Gaertn. Fruct. 2:169.t.116.f.4. 1790; Brown 26; FBI 1:418; FPM 91.

Lianes. Leaves 7-9 x 4-6 cm, ovate-elliptic, coriaceous, biglandular at base. Flowers c. 1.5 cm across, white with pinkish tinge, in terminal or axillary racemes. Fruit a 3-winged samara.

Occasionally cultivated in gardens. Fruits rotate while flying in the air. Fl.: February-April. Fr.: April-July.

ZYGOPHYLLACEAE

Shrubs or trees; corolla blue	.. .. .	<i>Guaiacum</i>
Prostrate herbs; corolla yellow	.. .. .	<i>Tribulus</i>

Guaiacum L.

Guaiacum officinale L. Sp.Pl.381. 1753; Brown 34; FTN 1:49.

Leaves pinnate; leaflets 2 pairs, each 2-4 x 1.2-2 cm, obovate to elliptic. Flowers c. 2 cm across, in terminal umbels. Fruit a yellow capsule; seeds red.

Occasionally cultivated in gardens and parks as an ornamental. Fl.: November-March. Fr.: December-April.

Tribulus L.

Tribulus terrestris L. Sp.Pl.387. 1753; FBI 1:423; FPM 92; Mayur. 56; FTN 1:49. *T. lanuginosus* L. Sp.Pl.387. 1753; Brown 34.

Leaves pinnately compound; leaflets 4-5 pairs, each 5-10 x 3-5 mm, oblong, base oblique. Flowers c. 1 cm across, yellow. Fruits c. 1 cm across, 5-angled, spiny.

A weed of waysides and waste places; common. Fl. & Fr.: throughout the year.

OXALIDACEAE

Leaves pinnately many-foliolate	.. .. .	<i>Biophytum</i>
Leaves palmately 3-foliolate	.. .. .	<i>Oxalis</i>

Biophytum DC.

Biophytum sensitivum (L.) DC. Prodr. 1:690. 1824; FBI 1:436; FPM 95; Mayur. 57; Veldk. in Steenis, Fl.Males. ser. 1.7:162. 1971; FTN 1:50. *Oxalis sensitiva* L. Sp.Pl.434. 1753 p.p.; Wood 253.

Herbs, up to 10 cm tall. Leaflets 8-13 pairs, each 6-12 x 4-7 mm, ovate, oblong or obovate. Flowers c. 8 mm across, pale pink, in long-peduncled umbels. Fruit a capsule.

A weed of open fields, especially moist places; rare. Fl. & Fr.: November-February.

Oxalis L.

Oxalis corniculata L.Sp.Pl.435. 1753; Brown 32; FBI 1:436; FPM 94; Mayur. 57; Veldk. in Steenis, Fl.Males.ser. 1.7:155. 1971; FTN 1:51.

Prostrate herbs, rooting at nodes. Leaflets 5-15 x 4-14 mm, obcordate. Flowers c.8 mm across, yellow, in axillary cymes. Capsules up to 1.5 cm long, subterete.

A weed of gardens and lawns, particularly in moist places; rare. Fl. & Fr.: October-March.

AVERRHOACEAE**Averrhoa L.**

Leaflets 3-5 pairs	.. .. .	<i>A. carambola</i>
Leaflets 10-18 pairs	.. .. .	<i>A. bilimbi</i>

Averrhoa bilimbi L.Sp.Pl.428. 1753; Brown 32; FBI 1:439; FPM 95; Mayur. 57; Veldk. in Steenis, Fl. Males. ser. 1.7:177. 1971; FTN 1:51.

Trees, up to 6 m tall. Leaflets 4-7 x 1-3.1 cm, oblong or ovate-lanceate. Flowers c. 1 cm across, in panicles on old stems. Berries up to 5 x 0.5 cm, oblong.

Occasionally cultivated around houses. Fl. & Fr.: January-March.

Fruits made into pickles. Tamil: Pulichai.

Averrhoa carambola L. Sp.Pl.428. 1753; Brown 32; FBI 1:439; FPM 95; Mayur. 57; Veldk. 175; FTN 1:51.

Trees, up to 6 m tall. Leaflets 3-7 x 2-4 cm, ovate or ovate-lanceate. Flowers c. 1.3 cm across, purplish, in axillary panicles. Berries upto 5 x 2 cm, oblong.

Occasionally cultivated around houses. Fl. & Fr.: February-April.

Fruits made into pickles. Tamil: Thamaratthai.

BALSAMINACEAE**Impatiens L.**

Impatiens Balsamina L. Sp.Pl.938. 1753; FBI 1:453; FPM 101; Barnes in JIBS 18(3):101. 1939; FTN 1:52; Grey-Wilson in Dassan. & Fosb. Rev.Handb.Fl.Ceylon 5:117. 1985.

Succulent herbs, up to 70 cm tall. Leaves 5-10 x 1.5-3 cm, elliptic-lanceate. Flowers c. 4 cm across, white or pink to red. Capsules up to 12 x 6 mm, ellipsoid.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year.

RUTACEAE

- | | | |
|---------------------------------|---------|------------------|
| 1. Plants armed: | | |
| 2. Leaves simple: | | |
| 3. Petioles winged | .. .. . | <i>Citrus</i> |
| 3. Petioles not winged: | | |
| 4. Fruits under 3 cm across | .. .. . | <i>Atalantia</i> |
| 4. Fruits over 4 cm across | .. .. . | <i>Pamburus</i> |
| 2. Leaves compound: | | |
| 5. Twigs prickly | .. .. . | <i>Toddalia</i> |
| 5. Twigs thorny: | | |
| 6. Leaflets 3 | .. .. . | <i>Aegle</i> |
| 6. Leaflets more than 3 | .. .. . | <i>Limonia</i> |
| 1. Plants unarmed: | | |
| 7. Leaflets oblique at base: | | |
| 8. Flowers 4-merous | .. .. . | <i>Clausena</i> |
| 8. Flowers 5-merous | .. .. . | <i>Murraya</i> |
| 7. Leaflets not oblique at base | .. .. . | <i>Glycosmis</i> |

Aegle Correa (*nom.cons*)

***Aegle marmelos* (L.)** Correa in Trans. Linn. Soc. London 5: 223. 1800; Brown 24; FBI 1:516; FPM 115; Mayur. 60; FTN 1:57; Stone in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:414. 1985. *Crateva marmelos* L.Sp.Pl. 444. 1753.

Trees, up to 8 m tall. Leaflets 2.5-8 x 1-5 cm, elliptic to obovate. Flowers c. 2 cm across, greenish. Berries up to 7 cm across, greenish, with woody pericarp.

Occasionally cultivated around houses, also runs wild. Fl.: April-July. Fr.: throughout the year.

The pulp of fruits applied to hair before bathing for cooling. Tamil: Vilvam.

Atalantia Correa

***Atalantia monophylla* (L.)** Correa in Ann. Mus. Natl. Hist. Nat. 6:383. 1805; Brown 22; FBI 1:511; FPM 113; Mayur. 61; Swingle, *Citrus* Ind. 1:316. 1967; FTN 1:57; Stone in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:418. 1985. *Limonia monophylla* L.Mant. Alt. 237. 1771.

Shrubs or trees with axillary thorns, up to 6 m tall. Leaves 3-6 x 1.5-3 cm, ovate-elliptic, apex emarginate. Flowers c. 1.2 cm across, white, 4-merous, in axillary fascicles. Fruits c. 2 cm across.

In scrub jungles; very common. Trunk deeply furrowed when old; bark smooth. Inflorescences replace thorns while flowering. Fl.: August-November. Fr.: throughout the year. Tamil: Kaattu naarthai.

Citrus L.

Flowers under 2.5 cm across

.. ..

C. aurantifolia

Flowers over 2.5 cm across

.. ..

C. limon

Citrus aurantifolia (Christm.) Swingle in J. Wash. Acad. Sci. 3:465. 1913 & *Citrus* Ind. 1:374. 1967; FTN 1:58; Stone in Dassan. & Fosb. 5:424. 1985. *Limonia aurantifolia* Christm. in Linn. Pflanzensyst. 1:618. 1777. *Citrus medica* L. var. *acida* (Roxb.) Hook.f.Fl.Brit. India 1:515. 1875; FPM 115; Mayur. 61. *C. acida* Roxb. Fl. Ind. 3:391. 1832.

Shrubs or trees, up to 6 m tall. Leaves 5-9 x 3-7 cm, elliptic or ovate-elliptic. Flowers c. 2.2 cm across, white, in axillary cymes. Fruits 3-5 cm across, yellow when ripe.

Commonly cultivated around houses and in fields. Fl. & Fr.: throughout the year.

Fruits used for making lime juice, also made into pickles. Tamil: Elumichai. English: The Sour Lime.

Citrus limon (L.) Burm.f.Fl.Ind. 173. 1768; Swingle, *Citrus* Ind. 372; FTN 1:58; Stone 428. *C. medica* L. Var. *limon* L.Sp.Pl.782. 1753. *C. medica* L. var. *limonum* (Risso) Hook.f.Fl.Brit. India 1:515. 1875; FPM 15; Mayur. 61. *C. limonum* Risso in Ann.Mus.Natl.Hist. Nat.20:201. 1813; Brown 25.

Shrubs or trees up to 6 m tall. Leaves 4-7 x 2-5 cm, elliptic-ovate. Flowers c. 3 cm across, white with pinkish tinge. Fruits 6-8 cm across, greenish.

Occasionally cultivated around houses. Fl.:January-March. Fr.:February-June.

Fruits made into pickles. Tamil: Naarthai.

Citrus aurantium L.Sp.Pl. 782. 1753; Brown 25; FBI 1:515; FPM 115; Mayur. 62; Swingle *Citrus* Ind. 374; FTN 1:58; Stone 426.

Brown and Mayuranathan record this, perhaps cultivated.

Citrus grandis (L.) Osbeck, Dagbok Ostind. Resa 98.1757; Swingle, *Citrus* Ind. 382; FTN 1:58; Stone 426. *C. aurantium* L. var. *grandis* L. Sp.Pl. 783. 1753. *C. decumana* L. Murr. Syst. ed. 13.508. 1774; Brown 24; FPM 115; Mayur. 61.

Brown and Mayuranathan record this, perhaps cultivated. Tamil: Bumbili Mass, English: The Pumelo.

Citrus maderaspatana Hort. ex Tanaka in J. Indian Bot. Soc. 16:238. 1937; FTN 1:59.

"The kitchli of Madras, cultivated" (Tanaka, *l.c.*)

Citrus medica L. Sp.Pl. 782. 1753; FBI 1:514; FPM 115; Mayur. 61; Tanaka 238; Swingle, *Citrus* Ind 370; FTN 1:59; Stone 430.

Mayuranathan records this as cultivated.

Citrus natsudaiddai Hayata in Icon. Pl. Formosan. 8:29. 1919; Tanaka 238; FTN 1:59.

"..... under cultivation Madras" (Tanaka *l.c.*)

Clausena Burm.f.

Clausena dentata (Willd.) Roem. Syn. Hesper. 1:44. 1846; Tanaka in JIBS 16:230. 1937; Swingle, *Citrus* Ind. 1:220. 1967; Stone in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:435. 1985. *Amyris dentata* Willd. Sp.Pl. 2:337. 1799. *Clausena willdenovii* Wight & Arn. Prodr. 96. 1834; FBI 1:506; FPM 110; Mayur. 59.

Shrubs, up to 2 m tall. Leaves 9-13-foliolate; leaflets 3-5 x 1-2.5 cm, elliptic-lanceate. Flowers c. 1 cm across, white, in axillary racemes. Berries c. 1 cm across.

In scrub jungles and thickets; rare. Fl.: June-August. Fr.: August-October.

Glycosmis Correa

Glycosmis mauritiana (Lam.) Tanaka, Bot. Not. 159. 1928 & JIBS 16:229. 1937; FTN 1:60. *Limonia mauritiana* Lam. Encycl. 3: 517. 1789. *Glycosmis cochinchinensis* auct. non Pierre 1899; FPM p.p.; Mayur. 59.

Shrubs, up to 5 m tall. Leaves 1-5-foliolate; leaflets 5-10 x 3-5 cm, elliptic. Flowers c. 8 mm across, white, in short-peduncled axillary panicles. Fruits c. 1 cm across, orange-red when ripe.

In scrub jungles and thickets; common. Fl.: May-September. Fr.: July-November.

Fruits eaten by children. Tamil: Gonji.

Limonia L.

Limonia acidissima L. Sp.Pl. ed.2. 554. 1762; Stone & Nicolson in Taxon 27:551. 1978; FTN 1:61; Stone in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:451. 1985. *Feronia elephantum* Correa in Trans. Linn. Soc. London 5:224. 1800; Brown 24; FBI 1:516; FPM 114; Mayur. 60.

Trees, up to 12 m tall. Leaves 5-7-foliolate; rachis winged; leaflets 2-3 x 1-2.2 cm, obovate-elliptic. Flowers c. 1.2 cm across, in axillary or terminal corymbs. Berries up to 6 cm across, with woody pericarp.

Occasionally cultivated around houses, sometimes runs wild. Fl.: March-June. Fr.: throughout the year.

Fruits edible when ripe. Tamil: Vila maram. English: The wood Apple.

Murraya L.

Inflorescences more than 15-flowered

.. ..

M. koenigii

Inflorescences less than 10-flowered

.. ..

M. paniculata

Murraya koenigii (L.) Spreng. Syst. Veg. 2:315. 1826; FBI 1:503; FPM 111; Mayur. 59; Tanaka in JIBS 16:231. 1937; Swingle, *Citrus* Ind. 1:236. 1967; FTN 1:61; Stone in Dassan.

& Fosb. Rev.Handb. Fl. Ceylon 5:458. 1985. *Bergera koenigii* L. Mant. Alt. 565. 1771; Brown 23.

Shrubs or trees, up to 6 m tall. Leaves 11-21-foliolate; leaflets 2-5 x 1-2.5 cm, lanceate to ovate or suborbicular. Flowers c. 1 cm across, white. Fruits black when ripe.

Commonly cultivated around houses, also runs wild. Fl.: April-June. Fr.: May-August.

Leaflets aromatic, used for flavouring curries. Tamil: Karuveppilai. English: The Curry Leaf Tree.

Murraya paniculata (L.) Jack in Malayan Misc. 6:31. 1820; Santapau in RBSI 16 (1):39. 1953; Tanaka 231; FTN 1:61; Stone 459, *Chalcas paniculata* L. Mant. Pl. 68. 1767. *Murraya exotica* L. Mant. Alt. 563. 1771, "Murreea"; Brown 23; FBI 1:502; FPM 111; Mayur. 59.

Shrubs, up to 3 m tall. Leaves 3-7-foliolate; leaflets 1.5-2 x 0.7-1.2 cm, ovate or ovate-elliptic. Flowers c. 1.2 cm across, white, in axillary racemes. Fruits red when ripe.

Occasionally cultivated in gardens as an ornamental. Fl.: March-September. Fr.: throughout the year. Native of china.

Pamburus Swingle

Pamburus missionis (Wight) Swingle in J. Wash. Acad. Sci. 6:338. 1916; Tanaka in JIBS 16:233. 1937; Swingle, *Citrus* Ind. 1:263. 1967; FTN 1:61; Stone in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 5:465. 1985. *Limonia missionis* Wight, Ic. t. 175. 1839. *Atalantia missionis* (Wight) Oliver in J. Linn. Soc. Bot. 5 (Suppl. 2): 25. 1861; FBI 1:513; FPM 114.

Shrubs or trees, up to 6 m tall. Leaves 7-14 x 5-9 cm, ovate-elliptic. Flowers c. 2 mm across, white, 4 - merous, in axillary thyrses. Fruits 6-7 cm across.

In jungles; rare. Bark fissured longitudinally. Flowers sweet-scented. Fl.: January-March. Fr.: throughout the year.

Toddalia Juss. (nom.cons.)

Toddalia asiatica (L.) Lam. Tabl. Encycl. 2:116. 1797; FPM 107; Mayur. 60; Stone in Dassan. & Fosb.Rev. Handb. Fl. Ceylon 5:472. 1985. *Paullinia asiatica* L. Sp.Pl. 365. 1753. *Toddalia aculeata* Pers. Syn. 1:249. 1805; Wood 254; FBI 1:497.

Dioecious straggling shrubs or lianes. Leaves digitately 3-foliolate; leaflets 3-6 x 1-2 cm, obovate-elliptic, apex emarginate. Flowers c. 5 mm across, pale white. Berries c. 1 cm across, orange-yellow when ripe.

In scrub jungles; common. Fl.: October - December. Fr.: November-January. Tamil: Milaharanai.

SIMAROUBACEAE

Ailanthus Desf.

Ailanthus excelsa Roxb. Pl. Cor.t.23. 1795; FBI 1:518; FPM 116; Nooteb, in Steenis, Fl. Males. ser. 1.6:219. 1962; Basak. FFI 4:4. 1980; FTN 1:63.

Trees, up to 8 m tall. Leaves 14-30-foliolate; leaflets 6-9 x 4-5 cm, oblong-lanceate, base oblique. Flowers c. 8 mm across, in axillary panicles. Fruit a samara.

Occasionally cultivated in parks and avenues, Vandalur, also runs wild. Fl.: October-January. Fr.: December-March.

OCHNACEAE

Ochna L.

Ochna obtusata DC. in Ann. Mus. Natl. Hist. Nat. 17:411.t. 11. 1811; Robson in Taxon 11:51. 1962; FTN 1:64. *O. squarrosa* auct. non L. 1753; Brown 35; FBI 1:523; FPM 118; Mayur. 62.

Deciduous shrubs. Leaves 8-13 x 3-6 cm, obovate-elliptic to elliptic, obscurely serrulate. Flowers c. 3 cm across, yellow, in axillary or terminal racemes or panicles. Fruit of 5-8 drupelets on a much-swollen torus.

In scrub jungles; common. Drupelets purplish-black when ripe, seated on the enlarged torus with the single, persistent style. Fl. & Fr.: April-August. Tamil: Silanthi Maram.

MELIACEAE

1. Leaves unipinnate:

2. Fruit a drupe; leaflets serrate

.. ..

Azadirachta

2. Fruit a capsule; leaflets entire

.. ..

Swietenia

1. Leaves bipinnate

.. ..

Melia

Azadirachta Juss

Azadirachta indica A.Juss. in Mem. Mus.Natl. Hist.Nat. 19:221.t.2.f.5. 1830; Brown 29; FPM 127; Mayur. 63; FTN 1:67.

Trees, up to 12 m tall. Leaves 7-9-foliolate; leaflets 4-9 x 1.5-3 cm, lanceate-ovate, base oblique. Flowers c. 8 mm across, white, in axillary panicles. Drupes c. 1.3 x 0.8 cm.

Commonly cultivated around houses, also runs wild. Fl.: March-May. Fr.: April-July.

The tree gives good shade in the hot summer. Tamil:Veppa maram. English:The Neem Tree.

Melia L.

Melia azedarach L. Sp.Pl. 384. 1753; Brown 28; FBI 1:544; FPM 126; Mayur. 63; FTN 1:67.

Shrubs or trees, up to 8 m tall. Leaflets 3-6 x 1-2.5 cm; ovate, obovate or lanceate. Flowers c. 1 cm across, violet, in axillary panicles. Drupes c. 1.5 x 1 cm.

Occasionally cultivated around houses. Fl.: October-February. Fr.: throughout the year. Tamil: Malai Vaambu. English: The Persian Lilac. Native of Persia and subhimalayan regions.

Swietenia Jacq.

Swietenia mahagoni (L.) Jacq. Enum. Pl. Carib. 20. 1760; Brown 29; FPM 134; Mayur. 63; Styles in J. Oxf. Univ. For. Soc. ser.6. 17. 1968 & Fl. Neotrop. 401.f.28. 1981; FTN 1:68. *Cedrela mahagoni* L. Syst. Nat. ed. 10.2:940. 1759.

Trees, up to 15 m tall. Leaflets 5-8 x 2-3 cm, lanceate-falcate, base oblique. Flowers c. 8 mm across, white, in axillary panicles. Capsules woody.

Occasionally cultivated in parks and avenues. Fl.: March-May. Fr.: throughout the year.

Timber valuable for furniture. English: The Mahogany Tree. Native of the West Indies.

FLINDERSIACEAE**Chloroxylon DC. (nom. cons.)**

Chloroxylon swietenia DC. Prodr. 1:625. 1824; Brown 30; FBI 1:569; FPM 109; FTN 1:69; Stone in Dassan. & Fosb.Rev. Handb. Fl.Ceylon 5:421. 1985.

Shrubs or trees, up to 8 m tall. Leaves 20-30-foliolate; leaflets 2-2.5 x 1-1.3 cm, oblong-lanceate, base oblique. Flowers c. 1 cm across, white. Capsules 3-valved.

In scrub jungless; very rare. Fl. & Fr.: March-June. Tamil: Purush.

OLACACEAE**Olax L.**

Olax psittacorum (Willd.) Vahl, Enum. Pl.34.1804; S.M. Almeida & M.R. Almeida in JBNHS 81:742. 1983. *Fissilia psittacorum* Willd. Sp.Pl.1:194. 1797. *Olax scandens* Roxb. Pl.Cor.t.102. 1799; FBI 1:575; FPM 136; Mayur. 64; Sleumer in Blumea 26:157. 1980; FTN 1:70.

Lianes. Leaves 3-7 x 1.5-3 cm, oblong-elliptic or elliptic. Flowers c. 5 mm across, pale white, in short axillary racemes. Drupes c. 8 mm across, partly enveloped by accrescent calyx.

In jungles and thickets; rare. Fl.: December-March. Fr.: February-April. Tamil: Kadalranchi.

OPILIACEAE**Cansjera** Juss.

Cansjera rheedii Gmel. Syst. 1:280. 1791; FBI 1:582; FPM 138; FTN 1:70.

Straggling shrubs. Leaves 3-6 x 1-2.5 cm, lanceate-ovate, apex acuminate. Flowers c. 3 mm across, in dense, axillary spikes. Drupes c. 1 cm across, orange-red when ripe.

In scrub jungles; rare. Fl.: November-January. Fr.: December-March

Opilia Roxb.

Opilia amentacea Roxb. Pl. Cor.t.158. 1802; FBI 1:583; FPM 138; Mayur. 64; FTN 1:70.

Mayuranathan records this.

ICACINACEAE**Pyrenacantha** Hook.

Pyrenacantha volubilis Wight in Bot. Misc. 2:107. 1831; FPM 142; FTN 1:71.

Dioecious twiners. Leaves 7-11 x 2.5-4 cm, elliptic-oblong, undulate, margin glandular. Flowers c. 2 mm across, the staminate in filiform spikes and the pistillate in subcapitate heads. Fruits up to 1.5 x 1 cm.

In thickets along roadsides, Madhavaram; rare. Fl.: July-September. Fr.: August-October.

CELASTRACEAE**Maytenus** Molina

Maytenus emarginata (Willd.) Ding Hou in Steenis, Fl. Males. ser. 1.6:241. 1962; FTN 1:74.

Celastrus emarginatus Willd. Sp.Pl. 1:1128. 1798; Wood 254. *Gymnosporia emarginata* (Willd.) Thw. Enum. Pl. Zeyl. 409. 1864; FBI 1:621; FPM 151; Mayur. 65. *Gymnosporia montana* (Roth) Benth. Fl. Austral. 1:400. 1863; FBI 1:621; FPM 150. *Celastrus montanus* Roth in Roem. & Schult. Syst. Veg. 5:427. 1819.

Thorny shrubs, up to 3 m tall. Leaves 2-10 x 1-7 cm, obovate to elliptic, margin entire to obscurely dentate, apex retuse to emarginate. Flowers c. 7 mm across, white, in axillary fascicles. Capsules 3-valved; seeds red.

In scrub jungles; common. Fl.: November-February. Fr.: January-April.

HIPPOCRATEACEAE

Flowers in dichasia; fruits winged

.. ..

Reissantia

Flowers in fascicles; fruits not winged

.. ..

Salacia

Reissantia Halle

Reissantia indica (Willd.) Halle in Mem. Inst. Franc. Afrique Noire 64:85. 1962; Ding Hou in Steenis, Fl. Males. ser. 1.6:401. 1964; FTN 1:75. *Hippocratea indica* Willd. Sp.Pl.1:193. 1797; FBI 1:624; FPM 153.

Lianes. Leaves 2-7 x 1-3 cm, obovate to elliptic. Flowers c. 1.5 mm across, pale yellow. Capsules up to 4 x 1.5 cm, oblong-elliptic, 2-valved.

In scrub jungles; rare. Fl. & Fr.: throughout the year.

Salacia L.

Salacia chinensis L. Mant. Alt. 293. 1771; Ding Hou in Steenis, Fl. Males. ser. 1.6(3):419. 1964, "*sinensis*"; FTN 1:75. *S. prinoides* DC. Prodr. 1:571. 1824; FBI 1:625; FPM 154.

Straggling shrubs. Leaves 4-7 x 2.5-3 cm, elliptic, obscurely serrulate. Flowers c. 7 mm across, greenish. Drupes c. 1.2 cm across, globose, orange-red when ripe.

In scrub jungles, Tambaram; very rare. Fl.: January-March. Fr.: March-April.

RHAMNACEAE

1. Plants armed; fruits drupaceous:

2. Twigs with stipular spines

.. ..

Ziziphus

2. Twigs with stem thorns

.. ..

Scutia

1. Plants unarmed; fruits samaroid

.. ..

Ventilago

Scutia (Commers. ex DC.) Brongn.

Scutia myrtina (Burm.f.) Kurz in J. Asiat. Soc. Bengal 44:168. 1875; FPM 160; Mayur. 67; FTN 1:77. *Rhamnus myrtinus* Burm.f. Fl. Ind. 60. 1768. *Scutia indica* Brongn. Mem. Fam. Rhamn. 56. 1826; Brown 36; FBI 1:640.

Straggling shrubs or lianes, with axillary hook-like thorns. Leaves 1.5-3 x 1.2-2.3 cm, obovate. Flowers c. 4 mm across, in axillary fascicles. Fruits c. 8 mm across.

In scrub jungles; common. Fl.: March-May. Fr.: April-July.

Ventilago Gaertn.

Ventilago madraspatana Gaertn. Fruct. 1:223.t.49.f.2. 1788; FBI 1:631; FPM 156; Mayur. 65; Banerjee & Mukherjee in Indian Forester 96:207. 1970; FTN 1:77. *V. gamblei* Suesseng. in Engler & Prantl, Pflanzenf. ed. 2. 20d:152. 1953; FTN 1:77. *V. lanceolata* Gamble in Kew Bull. 1916:134. 1916 & FPM 157 non Merr. 1915.

Straggling shrubs or lianes; bark black and longitudinally fissured when old. Leaves 3-6 x 2-3.5 cm, elliptic to ovate, obscurely serrulate. Flowers c. 4 mm across, in large terminal and axillary panicles. Fruits up to 3.5 x 0.8 cm, oblong-elliptic.

In scrub jungles; common. Fl.: February-March. Fr.: March-May.

Leaves boiled in water and this water used for bathing to get rid of body pain. Tamil: Vempaadam.

Ziziphus Mill.

- | | | |
|---|---------|----------------------|
| 1. Leaves acute-acuminate at apex | .. .. . | <i>Z. oenoplia</i> |
| 1. Leaves not acute-acuminate at apex: | | |
| 2. Peduncles longer than petioles; styles 3 | .. .. . | <i>Z. xylopyrus</i> |
| 2. Peduncles shorter than petioles; styles 2. | .. .. . | <i>Z. mauritiana</i> |

Ziziphus mauritiana Lam. Encycl. 3:319. 1789; FTN 1:78. *Z. jujuba* (L.) Gaertn. Fruct. 1:203. 1788 non Mill. 1768; Brown 36; FBI 1:632; FPM 157; Mayur. 66. *Rhamnus jujuba* L. Sp. Pl. 194. 1753.

Shrubs or trees, up to 8 m tall. Leaves 4-6 x 3-4 cm, elliptic or elliptic-obovate, base oblique. Flowers c. 5 mm across, greenish. Fruits c. 2 cm across. ovoid.

Commonly cultivated around houses, also runs wild. Fl.: August-October. Fr.: September-March.

Fruits edible. Tamil: Elanthai.

Ziziphus oenoplia (L.) Mill. Gard. Dict. ed.8.n.3. 1768; FBI 1:634; FPM 158; Mayur. 66; FTN 1:78. *Rhamnus oenoplia* L. Sp. Pl. 194. 1753.

Straggling shrubs or lianes. Leaves 3-6 x 1.5-3 cm, ovate-lanceate, base oblique. Flowers c. 4 mm across, pale yellow. Fruits c. 7 mm across, globose, purplish-black when ripe.

In scrub jungles; common. Fl.: October-November. Fr.: November-December.

Fruits eaten by children. Tamil: Soorai mullu.

Ziziphus xylopyrus (Retz.) Willd. Sp. Pl. 1:1104. 1798; FBI 1:634; FPM 158; Mayur. 66; FTN 1:78. *Rhamnus xylopyrus* Retz. Obs. Bot. 2:11. 1781.-Plate 10.

Shrubs or trees, up to 6 m tall. Leaves 4-8 x 3-6 cm, ovate-elliptic to suborbicular, base oblique. Flowers c. 6 mm across, pale yellow. Fruits c. 1.5 cm across, tomentose.

In scrub jungles; common. Fl.: May-August. Fr.: throughout the year. Tamil: Kottai elanthai.

Colubrina Rich.

Colubrina asiatica (L.) Brongn. Mem. Fam. Rhamn. 62. 1826; Brown 37; FBI 1:642; FPM 161; Mayur. 66; FTN 1:76. *Ceanithus asiaticus* L. Sp. Pl. 196. 1753.

Brown and Mayuranathan record this.

VITACEAE

1. Twigs woolly; peduncles tendrillar	.. ..	<i>Ampelocissus</i>
1. Twigs not woolly; peduncles not tendrillar:		
2. Fruits 2-4-seeded	.. ..	<i>Cayratia</i>
2. Fruits 1-seeded:		
3. Leaves simple	.. ..	<i>Cissus</i>
3. Leaves trifoliolate	.. ..	<i>Cyphostemma</i>

Ampelocissus Planch. (*nom.cons.*)

Ampelocissus tomentosa (Heyne ex Roth) Planch. in Vigne Amer. Vitic. Europe 8:375. 1884; FPM 165; FTN 1:79. *Vitis tomentosa* Heyne ex Roth in Roem. & Schult. Syst. Veg. 5:318. 1819; FBI 1:650.

Climbers with leaf-opposed tendrils. Leaves 9-13 x 10-14 cm, palmately 3-5-lobed; lobes bidentate, apex acute. Flowers c. 2 mm across, purplish-red, in leaf-opposed cymes. Fruits c. 7 mm across.

In scrub jungles, Vandalur hill; very rare. Fl. & Fr.: July-September.

Cayratia Juss.

Cayratia trifolia (L.) Domin in Biblioth. Bot. 86:371. 1927; Baker & Bakh.f. Fl. Java 2:93. 1965. *Vitis trifolia* L. Sp.Pl. 203. 1753. *Cayratia carnosa* (Lam.) Gagnep. in Lecomte, Natul. Syst. (Paris) 1:347. 1911; FPM 169; Mayur. 69; FTN 1:79. *Cissus carnosa* Lam. Encycl. 1:31. 1783. *Vitis carnosa* (Lam.) Wight & Arn. Prodr. 127. 1834; Brown 30; FBI 1:654.

Climbers. Leaflets 2.5-7 x 2-4 cm, the terminal elliptic and the laterals oblique-ovate, margin serrate. Flowers c. 2 mm across, in axillary cymes.

A weed of waysides and waste places; rare. Fl. & Fr.: August-December.

Cayratia pedata (Lam.) Juss. ex Gagnep. in Lecomte, Natul. Syst. (Paris) 1:346. 1911; FPM 169; Mayur. 69; FTN 1:80. *Cissus pedata* Lam. Encycl. 1:31. 1783. *Vitis pedata* (Lam.) Wight & Arn. Prodr. 128. 1834; FBI 1:661.

Mayuranathan records this.

Cissus L.

Young stems sharply 4- angled; leaves glabrous	.. ..	<i>C. quadrangularis</i>
Young stems terete; leaves pubescent	.. ..	<i>C. vitiginea</i>

Cissus quadrangularis L. Mant. Pl. 39. 1767; FPM 167; Mayur. 68; FTN 1:81. *Vitis quadrangularis* (L.) Wall. ex Wight & Arn. Prodr. 125. 1834; Brown 30; FBI 1:645.

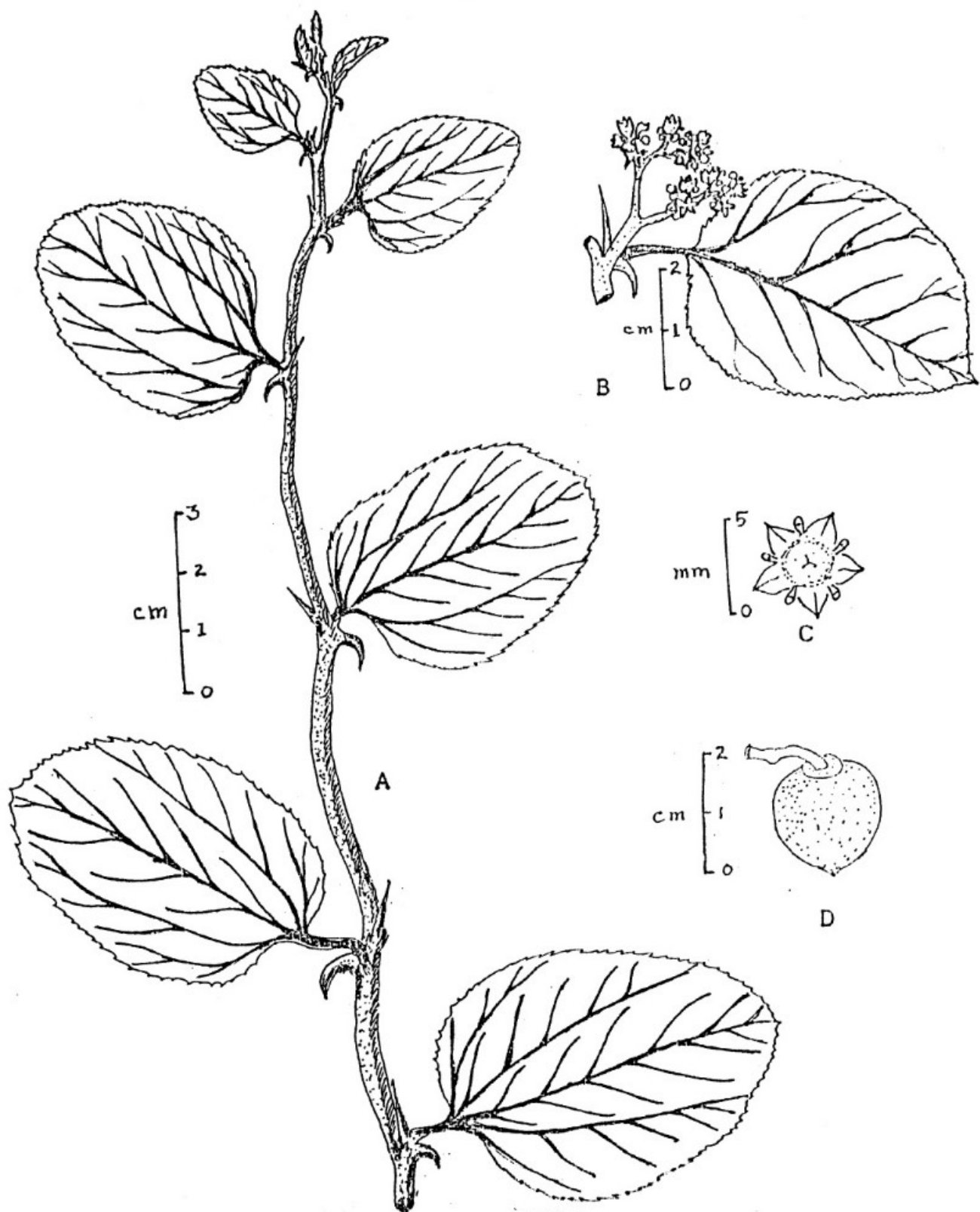


PLATE 10: Ziziphus xylopyrus (Retz.) Willd.

A - Vegetative twig. B - Flowering
twig. C - Flower. D. Fruit.

Climbers; stems green, succulent, with leaf-opposed tendrils. Leaves 2-4 x 2.5-5 cm, reniform or 3-lobed. Flowers c. 4 mm across, pinkish, in leaf-opposed cymes. Berries globose.

In scrub jungles and thickets, often associated with *Euphorbia antiquorum*; fairly common. Fl. & Fr.: August-December.

Young stems fried and ground into a "thuvayal" and eaten for gastric trouble. Tamil: Perandai.

Cissus vitiginea L. Sp.Pl. 117. 1753; FPM 167; Mayur. 68; FTN 1:81. *Vitis linnaei* Wall. ex Wight & Arn. Prodr. 126. 1834; FBI 1:649.

Lianes. Leaves 6-12 x 7-14 cm, palmately angled or parted, base cordate, margin dentate. Flowers c. 4 mm across, cream-coloured, in leaf-opposed cymes. Berries up to 8 x 5 mm, ellipsoid, violet-purplish when ripe.

In scrub jungles and thickets, also in waste places; common. Fl. & Fr.: August-November.

Cissus repens Lam. Encycl. 1:31. 1783; FPM 167; Mayur. 68; FTN 1:81. *Vitis repens* (Lam.) Wight & Arn. in Wight, Cat. 58. 833; FBI 1:646.

Mayuranathan records this.

Cyphostemma (Planch.) Alston

Cyphostemma setosum (Roxb.) Alston in Trimen, Handb. Fl. Ceylon 6 (Suppl.): 53. 1931; FTN 1:81. *Cissus setosa* Roxb. Fl. Ind. 1:438. 1820; FPM 168; Mayur. 68. *Vitis setosa* (Roxb.) Wight & Arn. Prodr. 127. 1834; Brown 30; FBI 1:654.

Succulent climbers, with leaf-opposed, branched tendrils; twigs glandular-bristly. Leaflets variable, the terminal 10-15 x 5-7.5 cm, elliptic-obovate, the laterals 8-13 x 4-9 cm, ovate. Flowers c. 5 mm across, in leaf-opposed cymes. Berries c. 1 cm across, bristly.

In waste places, also on fences and thickets; rare. Fl. & Fr.: August-December.

SAPINDACEAE

1. Leaves simple	.. ..	<i>Dodonaea</i>
1. Leaves compound:		
2. Leaflets three	.. ..	<i>Allophylus</i>
2. Leaflets other than three:		
3. Climbing herbs; leaves biternate	.. ..	<i>Cardiospermum</i>
3. Trees or shrubs; leaves unipinnate:		
4. Rachis winged	.. ..	<i>Filicium</i>
4. Rachis not winged		
5. Petals 4-5:		
6. Petals with scales	.. ..	<i>Lepisanthes</i>
6. Petals without scales	.. ..	<i>Sapindus</i>
5. Petals 0	.. ..	<i>Schleichera</i>

Allophylus L.

Allophylus serratus (Roxb.) Kurz in J. Asiat.Soc. Bengal 44: 185. 1876; FPM 175; Mayur. 70; Leenh. in Blumea 15:351. 1967; Mukherjee in Indian Forester 98:494. 1972; FTN 1:83. *Ornitrophe serrata* Roxb. Pl. Cor.t.61. 1796. *A.cobbe* Blume forma *serratus* (Roxb.) Hiern in Hook f.Fl.Brit. India 1:673. 1875.

Dioecious shrubs, up to 5 m tall. Leaflets 5-12 x 3.5-5 cm, elliptic, margin distantly serrate to undulate. Flowers c. 2.5 mm across, white, polygamous, in axillary thyrses. Fruits c. 6 mm across, orange-red when ripe.

In scrub jungles; very common. Fl.: October-November. Fr.: November-January.

Cardiospermum L.

Cardiospermum halicacabum L. Sp.Pl. 366. 1753; Brown 27; FBI 1:670; FPM 175; Mayur. 70; FTN 1:83.

Leaflets 2-6 x 1.5-3.5 cm, palmately 3-parted; lobes pinnately lobed or serrate. Peduncles long and slender, with a pair of hooks towards apices; flowers c. 4 mm across, white, in cymes. Capsules c. 1 cm across, 3-winged.

A weed of waste places, also on fences; common. Fl. & Fr.: August-February. Tamil: Modakkatthaan.

Dodonaea Mill.

Dodonaea angustifolia L.f. Suppl. Pl. 218. 1782; Leenh. in Blumea 28:280. 1983. *D.viscosa* sensu Hiern in FBI 1:697 p.p.; FPM 81; Mayur. 70; FTN 1:84.

Dioecious shrubs, up to 3 m tall. Leaves 5-10 x 1.5-3 cm, oblanceate-elliptic, base attenuate. Flowers 3-5 mm across, in terminal panicles. Capsules 2-3-winged, septicidal.

In scrub jungles; common. Fl. & Fr.: October-February.

Leaves ground well and applied over wounds of cattle as a remedy in villages. Tamil: Virali.

Filicium Thw. ex Hook.f.

Filicium decipiens (Wight & Arn.) Thw.Enum.Pl.Zeyl. 408. 1864; FBI 1:539; FPM 178; Mayur. 71; FTN 1:84. *Rhus decipiens* Wight & Arn. Prodr. 172. 1834.

Leaflets 9-17, each 3-5 x 1.5-2.5 cm, elliptic-lanceate. Flowers c. 5 mm across, in axillary panicles. Fruits c. 9 mm across, black when ripe.

Occasionally cultivated in gardens and avenues. Fl.: November-January. Fr.: January-February.

Lepisanthes Blume

Lepisanthes tetraphylla (Vahl) Radlk. in Sitzungsber. Math.-Phys. Cl.Koenigl.Bayer. Akad.Wi-ss.Muenchen 8:276. 1878; FPM 176; Mayur. 71; Leenh. in Blumea 17:63. 1969; FTN 1:84. *Sapindus tetraphylla* Vahl, Symb.Bot. 3:54. 1794. *Hemigyrosa canescens* (Roxb.) Blume in Rumphia 3:166. 1849; FBI 1:671. *Molinaea canescens* Roxb.Pl.Cor.t.60. 1796.

Leaflets 4-6, each 8-20 x 3-6 cm, elliptic-oblong, glabrous, shiny. Flowers c. 5 mm across, in axillary panicles. Fruits tomentose.

In scrub jungles; rare. Fl.: January-February.

Sapindus L.

Sapindus emarginatus Vahl, Symb. Bot. 3:54. 1794; Brown 27; FPM 178; Mayur. 71; FTN 1:85. *S. trifoliata* auct. non L. 1753; FBI 1:682 p.p.

Leaflets 4-6, each 6-18 x 2-5 cm, oblong-elliptic or oblanceate-obovate, puberulous. Flowers c. 5 mm across, usually in terminal panicles; petals hairy. Fruits of three drupelets, puberulous when young and glabrous later.

In waste places and roadsides, sometimes around houses; fairly common. Fl.: October-January. Fr.: December-March.

Schleichera Willd.

Schleichera oleosa (Lour.) Oken, Allg.Naturgesh. 3(2):1341. 1841; FTN 1:85. *Pistacia oleosa* Lour.Fl.Cochinch. 2:615. 1790. *Schleichera trijuga* Willd. Sp.Pl. 4:1096. 1805; FBI 1:681; FPM 177; Mayur. 71.

Leaflets usually 6, each 6-18 x 2.5-5 cm, obovate-oblanceate or elliptic-oblong. Flowers c. 4 mm across, in terminal and axillary panicles. Fruits ovoid; seeds with fleshy aril.

Occasionally cultivated in gardens and avenues. Leaves reddish when young. Fl.: February-April. Fr.: March-May.

Aril edible. Tamil: Poovam.

ANACARDIACEAE

1. Leaves simple:

2. Pedicels enlarging into pseudocarps

.. ..

Anacardium

2. Pedicels not enlarging into pseudocarps:

3. Stamens 8-10; carpels 5-6

.. ..

Buchanania

3. Stamens 1-5; carpel one

.. ..

Mangifera

1. Leaves compound

.. ..

Lannea

Anacardium L.

Anacardium occidentale L. Sp.Pl. 383. 1753; Brown 37; FBI 2:20; FPM 185; Mayur. 73; Ding Hou in Steenis, Fl. Males. ser. 1.8:421. 1978; FTN 1:87; Meijer in Dassan. & Fosb.Rev. Handb. Fl.Ceylon 4:8. 1983.

Trees, up to 8 m tall. Leaves 10-18 x 6-10 cm, obovate to elliptic-obovate. Flowers c. 6 mm across, pinkish-white, in terminal panicles. Nuts up to 3 x 2.3 cm; pseudocarps larger than nuts, obconic, yellow to red when ripe.

Commonly cultivated in forests, seashores, also around houses. Fl. & Fr.: January-May.

Pseudocarps and the kernel of seeds edible. Tamil: Munthiri. English: The Cashew. Native of tropical America.

Buchanania Spreng.

Buchanania axillaris (Desr.) Ramam. in Saldanha & Nicolson, Fl. Hassan Dist. 374. 1976; FTN 1:87; Meijer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:3. 1983. *Mangifera axillaris* Desr. in Lam. Encycl. 3:697. 1792. *Buchanania angustifolia* Roxb.Pl.Cor.t.262. 1820; FBI 2:23; FPM 184. *B. lanzan* auct. non Spreng in J.Bot. 2:234. 1800; Mayur. 72.

Shrubs or trees, up to 6 m tall. Leaves 6-13 x 2-6 cm, elliptic-oblong, coriaceous. Flowers c. 4 mm across, whitish, in terminal and axillary panicles. Drupes c. 1.5 cm across, subglobose.

In scrub jungles; fairly common. Fl. & Fr.: in successive waves throughout the year.

Kernel edible. Tamil: Kaattu maamaram.

Lannea A. Rich (nom.cons.)

Lannea coromandelica (Houtt.) Merr. in J. Arnold Arbor. 19:353. 1938; Ding Hou in Steenis, Fl. Males. ser. 1.8:478. 1978; FTN 1:88; Meijer in Dassan. & Fosb. Rev. Handb.Fl.Ceylon 4:21. 1983. *Dial'um coromandelicum* Houtt.Nat.Hist.ser.2.2:39.t.5.f.2. 1774. *Odina wodier* Roxb.Fl.Ind. 2:293. 1824; Brown 38; FBI 2:29; FPM 187; Mayur. 72.

Deciduous trees, up to 15 m tall. Leaves unipinnate; leaflets 5-11, each 4-14 'x 3-7 cm, elliptic or ovate. Flowers c. 5 mm across, yellow, in axillary, pendulous, spicate panicles. Fruits up to 1 x 0.8 cm, pale red when ripe.

In scrub jungles; very common. Fl.: April-June. Fr.: May-August.

Leaves often show insect galls. Tamil: Uthya maram.

Mangifera L.

Mangifera indica L.Sp.Pl. 200. 1753; Brown 38; FBI 2:13; FPM 185; Mayur. 72; Ding Hou in Steenis, Fl.Males.ser. 1.8:427. 1978; FTN 1:88; Meije in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 4:6. 1983.

Trees, up to 15 m tall. Leaves 12-25 x 3-6 cm, lanceate, coriaceous. Flowers c. 7 mm across, in terminal panicles. Fruits up to 12 x 8 cm.

Commonly cultivated around houses and orchards. Fl.: February-March. Fr.: March-May.

Fruits edible. Tamil: Maa maram. English: The Mango Tree.

MORINGACEAE

Moringa Adans.

Moringa pterygosperma Gaertn. Fruct. 2:314. 1791; Brown 56; FBI 2:45; FTN 1:90. *M. oleifera* auct. non Lam. 1785; FPM 192; Mayur. 73; Steenis in Steenis, Fl. Males. ser. 1.4:45. 1949.

Trees, up to 8 m tall. Leaves tripinnate; leaflets numerous, each 1-3 x 0.8-2 cm, elliptic-ovate. Flowers c. 2 cm across, white, in axillary panicles. Capsules up to 40 x 2 cm.

Commonly cultivated around houses and fields. Fl. & Fr.: throughout the year.

Leaves, flowers and unripe fruits used as vegetable. Tamil: Murungai maram. English: The Drumstick Tree.

FABACEAE

(PAPILIONACEAE)

1. Trees:

2. Pods orbicular *Pterocarpus*

2. Pods other than orbicular:

3. Leaves 3-foliolate:

4. Twigs prickly *Erythrina*

4. Twigs not prickly *Butea*

3. Leaves other than 3-foliolate:

5. Pods flattened:

6. Lateral leaflets opposite:

7. Pods with more than 4 seeds *Gliricidia*

7. Pods with less than 4 seeds *Pongamia*

6. Lateral leaflets alternate *Dalbergia*

5. Pods subcylindric *Sesbania*

1. Herbs, shrubs or climbers:

8. Leaves 2-foliolate *Zornia*

8. Leaves not 2-foliolate:

9. Stamens in 2 bundles of 5 each *Aeschynomene*

9. Stamens not in 2 bundles of 5 each:

10. Pods spirally coiled *Medicago*

10. Pods not spirally coiled:

11. Stamens 9 *Abrus*

11. Stamens 10:

- | | | |
|--|-------|------------------------|
| 12. Pods echinate: | | |
| 13. Herbs | .. .. | <i>Indigofera p.p.</i> |
| 13. Shrubs | .. .. | <i>Ormocarpum</i> |
| 12. Pods not echinate: | | |
| 14. Stamens monadelphous: | | |
| 15. Stipules adnate to petioles: | | |
| 16. Leaves 3-foliolate | .. .. | <i>Stylosanthes</i> |
| 16. Leaves 4-foliolate | .. .. | <i>Arachis</i> |
| 15. Stipules free from petioles: | | |
| 17. Anthers dimorphous: | | |
| 18. Stems twining | .. .. | <i>Teramnus</i> |
| 18. Stems not twining: | | |
| 19. Flowers solitary | .. .. | <i>Goniogyna</i> |
| 19. Flowers in racemes | .. .. | <i>Crotalaria</i> |
| 17. Anthers uniform: | | |
| 20. Pods constricted along one or both sutures | .. .. | <i>Desmodium p.p.</i> |
| 20. Pods not constricted: | | |
| 21. Pods winged along the upper suture | .. .. | <i>Derris p.p.</i> |
| 21. Pods not winged along any suture: | | |
| 22. Leaves 3-foliolate: | | |
| 23. Leaves pinnate: | | |
| 24. Stems erect | .. .. | <i>Cyamopsis</i> |
| 24. Stems prostrate or twining | .. .. | <i>Canavalia</i> |
| 23. Leaves palmate | .. .. | <i>Rothia</i> |
| 22. Leaves not 3-foliolate: | | |
| 25. Stems twining | .. .. | <i>Clitoria p.p.</i> |
| 25. Stems not twining | .. .. | <i>Tephrosia p.p.</i> |
| 14. Stamens diadelphous: | | |
| 26. Pods flattened: | | |
| 27. Pods constricted along one or both sutures | .. .. | <i>Desmodium p.p.</i> |
| 27. Pods not constricted along any suture: | | |
| 28. Pods with viscid hooked hairs | .. .. | <i>Pseudarthria</i> |
| 28. Pods without viscid hooked hairs: | | |
| 29. Stems sharply 3-angled | .. .. | <i>Eleiotis</i> |
| 29. Stems not 3-angled: | | |
| 30. Pods winged along the upper suture | .. .. | <i>Derris p.p.</i> |
| 30. Pods not winged along any suture: | | |
| 31. Leaves 3-foliolate: | | |
| 32. Pods 1-2-seeded | .. .. | <i>Rhynchosia</i> |
| 32. Pods 3- or more-seeded: | | |
| 33. Flowers in axillary pairs | .. .. | <i>Cajanus</i> |
| 33. Flowers not in axillary pairs: | | |

34. Leaflets 3-lobed	.. .. .	<i>Dichos</i>
34. Leaflets not lobed:		
35. Flowers pale yellow		
36. Leaflets ciliate on margins	.. .. .	<i>Macrotyloma</i>
36. Leaflets not ciliate on margins	.. .. .	<i>Dumasia</i>
35. Flowers not pale yellow:		
37. Pods over 1 cm wide	.. .. .	<i>Lablab</i>
37. Pods under 9 mm wide:		
38. Corolla rosy-purple	.. .. .	<i>Galactia</i>
38. Corolla blue	.. .. .	<i>Calopogonium</i>
31. Leaves not 3-foliolate:		
39. Stems twining	.. .. .	<i>Clitoria</i> p.p.
39. Stems not twining	.. .. .	<i>Tephrosia</i> p.p.
26. Pods not flattened:		
40. Pods breaking into 1-seeded segments	.. .. .	<i>Alysicarpus</i>
40. Pods not breaking into 1-seeded segments:		
41. Pods under 4 cm long:		
42. Corolla reddish	.. .. .	<i>Indigofera</i> p.p.
42. Corolla purplish	.. .. .	<i>Pycnospora</i>
41. Pods over 4 cm long:		
43. Leaves many-foliolate	.. .. .	<i>Sesbania</i>
43. Leaves 3-foliolate:		
44. Corolla purplish-red	.. .. .	<i>Macroptilium</i>
44. Corolla other than purplish-red	.. .. .	<i>Vigna</i>

Abrus Adans.

Abrus precatorius L.Syst.Nat.ed. 12.2:472. 1767; Brown 45; FBI 2:175; FPM 247; Mayur. 84; Breteler in Blumea 10:617. 1960; Verdc. in Kew Bull. 24:240. 1970; Rudd in Dassan. & Fosb. Rev.Handb.Fl.Ceylon 1:446. 1980; FTN 1:90.

Twiners. Leaves pinnate; leaflets 11-13 pairs, each 12-23 x 5-8 mm, oblong. Flowers c. 1 cm across, pale purple, in axillary peduncles. Pods up to 4 x 0.5 cm.

In scrub jungles and on hedges, also cultivated; common. Fl.: August-December. Fr.: throughout the year.

There are two forms: one having red seeds with a black spot on one side (wild) and the other having pale green seeds (cultivated).

Seeds sometimes used as jeweller's weight. Tamil:Gundumani.

Aeschynomene L.

Pods constricted along lower suture	.. ..	<i>A. indica</i>
Pods constricted along both sutures	.. ..	<i>A. aspera</i>

Aeschynomene aspera L.Sp.Pl. 713. 1753; Wood 256; FBI 2:152; FPM 234; Mayur. 77; Rudd in Reinwardtia 5:29. 1959; FTN 1:91.

Herbs, up to 1 m tall. Leaves unipinnate; leaflets 6-12 x 3-6 mm, oblong, base oblique. Flowers c. 2.5 cm across, yellowish, 3-4 together on short axillary peduncles. Pods up to 7 x 0.8 cm.

A weed of ponds and ditches; rare. Young stems hollow. Keel petals brownish. Fl. & Fr.: November-March.

Stems soft and light, used as fishing floats and in handicrafts. Tamil: Aattu netti.

Aeschynomene indica L.Sp.Pl. 713. 1753; Brown 43; FBI 2:151; FPM 234; Mayur. 77; Rudd 30; FTN 1:91.

Suberect herbs, up to 60 cm tall. Leaves unipinnate; leaflets 4-8 x 2-5 mm, oblong. Flowers c. 6 mm across, yellow, in short axillary racemes. Pods up to 4 cm long, flattened.

A weed of rice fields, ditches and shallow pools; common. Fl. & Fr.: August-March.

Alysicarpus Necker ex Desv. (nom.cons.)

- | | | |
|--|-------|--|
| 1. Calyx under 5 mm long: | | |
| 2. Pods constricted between seeds | .. .. | <i>A. monilifer</i> |
| 2. Pods not constricted between seeds | .. .. | <i>A. vaginalis</i> |
| 1. Calyx over 5 mm long: | | |
| 3. Pods constricted between seeds | .. .. | <i>A. rugosus</i> |
| 3. Pods not constricted between seeds: | | |
| 4. Leaves linear | | <i>A. bupleurifolius</i>
var. <i>bupleurifolius</i> |
| 4. Leaves narrowly elliptic | | <i>A. bupleurifolius</i>
var. <i>gracilis</i> |

Alysicarpus bupleurifolius (L.) DC. Prodr. 2:352. 1825 var. **bupleurifolius**; FBI 2:158; FPM 239; FTN 1:91. *Hedysarum bupleurifolium* L.Sp.Pl. 745. 1753.

Erect or suberect herbs, up to 50 cm tall. Leaves 3-7 x 0.2-0.5 cm. Flowers c. 6 mm across, purplish-pink, in terminal and axillary racemes. Pods up to 10 x 2 mm.

A weed of waste places, often amidst grasses; rare. Fl. & Fr.: December-March.

Alysicarpus bupleurifolius (L.) DC. var. **gracilis** (Edgew.) Baker in Hook.f.Fl.Brit.India 2:158. 1876; FPM 239 p.p. *A. gracilis* Edgew. in J.Linn. Soc. Bot. 9:312. 1869.

Erect herbs, up to 50 cm tall. Leaves 5-9 x 1.5-2.2 cm. Flowers c. 6 mm across, purplish pink, in terminal racemes. Pods up to 9 x 2 mm.

A weed of waysides and waste places; very rare. Fl. & Fr.: November-March.

Alysicarpus monilifer (L.) DC. Prodr. 2:353. 1825; FBI 2:157; FPM 238; Mayur. 78; FTN 1:91. *Hedysarum moniliferum* L.Mant. Pl. 102. 1767.

Prostrate or decumbent herbs. Leaves 1.5-5 x 1.2-2 cm, orbicular or ovate to lanceate, sometimes whitish along veins. Flowers c. 7 mm across, purplish, in terminal racemes. Pods up to 3 x 0.25 cm, moniliform.

A weed of waysides, waste places, playground etc.; very common. Fl. & Fr.: throughout the year.

Alysicarpus rugosus (Willd.) DC. Prodr. 2:353. 1825; FBI 2:159; FPM 239; Mayur. 79; Verdc. in Kew Bull. 24:67. 1970; FTN 1:92. *Hedysarum rugosum* Willd. Sp.Pl. 3:1172. 1803.

Erect or suberect herbs, up to 50 cm tall. Leaves 3-5 x 0.8-1.4 cm, lanceate or ovate. Flowers c. 6 mm across, purplish, in terminal racemes. Pods up to 12 x 2.5 mm.

A weed of waysides and waste places; fairly common. Fl. & Fr.: December-March.

Alysicarpus vaginalis (L.) DC. Prodr. 2:353. 1825; FBI 2:158; FPM 239; Mayur. 79; FTN 1:92. *Hedysarum vaginale* L. Sp.Pl. 746. 1753.

Prostrate herbs. Leaves 1.5-3 x 0.7-1.2 cm, ovate to lanceate. Flowers c. 6 mm across, purplish, in terminal racemes. Pods up to 2.5 x 0.3 cm.

A weed of moist places; rare. Fl. & Fr.: November-March.

Arachis L.

Arachis hypogaea L.Sp.Pl. 741. 1753; Brown 49; FBI 2:161; FPM 230; Purseglove, TCD 225; FTN 1:92.

Herbs, up to 60 cm tall. Leaflets 2-4.5 x 1.5-2.5 cm, elliptic. Flowers c. 1.2 cm across, yellow, axillary; calyx tube up to 4 cm long, filiform. Pods up to 4 x 1.3 cm.

Commonly cultivated in fields, also runs wild. Fl. & Fr.: February-April.

Cotyledons edible, yield ground nut oil. Tamil: Vaer kadalai. English: The Ground Nut.

Butea Koen. ex Roxb. (nom.cons.)

Butea monosperma (Lam.) Taub. in Engler & Prantl, Pflanzenf. 3(3):366. 1894; BIT 12; FTN 1:93. *Erythrina monosperma* Lam. Encycl. 1:391. 1785. *Butea frondosa* Koen. ex Roxb. in Asiat. Res. 3:369. 1792; Brown 48; FBI 2:194; FPM 252; Mayur. 86.

Leaflets 10-15 x 5-8 cm, obovate to suborbicular, coriaceous. Flowers c. 5 cm long, orange-yellow, on leafless branches; calyx almost black, woolly. Pods flattened, 1-seeded.

In jungles and open fields, also cultivated in gardens; rare. Fl.: February-March. Fr.: March-June.

Flowers very showy. Leaflets stitched together and used as substitute for meal plates.

Cajanus DC.

Cajanus scarabaeoides (L.) Thouars, Dict.Sc.Nat. 6:617. 1817; vander Maesen in Agri.Univ. Wagen.Pap. 85(4):189. 1985. *Dolichos scarabaeoides* L.Sp.Pl.726. 1753. *Atylosia scarabaeoides* (L.) Benth. in Miq.Pl.Jungh. 1:242. 1852; FPM 261; Barnes 12; FTN 1:93.

Slender twiners. Leaflets 1.5-3 x 1.2-2.5 cm, the terminal obovate and the laterals obovate-elliptic with oblique base, woolly. Flowers c. 7 mm across, yellow. Pods up to 2.2 x 0.6 cm.

In scrub jungles; very common. Fl. & Fr.: throughout the year.

Often confused with species of *Rhynchosia* but readily differentiated by the pods being 3-or more-seeded.

Calopogonium Desv.

Calopogonium mucunoides Desv. in Ann. Sci. Nat. (Paris) 9:423. 1826; FTN 1:93.

Trailing or twining herbs; twigs hirsute. Leaflets 4-8 x 2-4 cm, elliptic, ovate or rhomboid-ovate, the laterals oblique at base. Flowers c. 4 mm across, in axillary fascicles or in panicles of fascicles. Pods up to 4 x 0.5 cm.

A weed of shady places, Vandalur; rare. Fl. & Fr.: October-March.

Canavalia DC. (nom.cons.)

Leaflets stipellate	.. .. .	<i>C. lineata</i>
Leaflets not stipellate	.. .. .	<i>C. virosa</i>

Canavalia lineata DC. Prodr. 2:404. 1825; FPM 254; Mayur. 85; Sauer in Brittonia 16:162. 1964; FTN 1:94. *C. obtusifolia* auct. non DC. 1825; FBI 2:196.

Prostrate herbs, rooting at nodes, rarely climbing. Leaflets 4-10 x 2-6 cm, ovate-rhomboid. Flowers c. 2.5 cm across, rosy-purple, in axillary peduncles. Pods up to 8 x 2.5 cm.

A weed of sandy seashores, Ennur; rare. Fl. & Fr.: November-April.

Canavalia virosa (Roxb.) Wight & Arn. Prodr. 253. 1834; Brown 47; FPM 254; Mayur. 85; Sauer 152; FTN 1:94. *Dolichos virosus* Roxb. Fl. Ind. 3:301. 1832. *Canavalia ensiformis* DC. var. *virosa* (Roxb.) Baker in Hook.f. Fl.Brit.India 2:196. 1876.

Climbers. Leaflets 7-14 x 5-9 cm, ovate, base truncate, apex shortly acuminate. Flowers c. 3 cm across, rosy-purple, in long-peduncled, axillary racemes. Pods up to 13 x 2.5 cm.

In jungles and hedges; fairly common. Fl. & Fr.: October-April.

Canavalia gladiata (Jacq.) DC. Prodr. 2:404. 1825; Brown 46; FTN 1:94. *Dolichos gladiatus* Jacq. Coll. Bot. 2:276. 1788. *Canavalia ensiformis* auct.non DC. 1825; FBI 2:195; FPM 253; Mayur. 85.

Brown and Mayuranathan record this as cultivated.

Clitoria L.

Clitoria ternatea L. Sp.Pl.753. 1753; Brown 42; FBI 2:208; FPM 258; Mayur.90; FTN 1:95.

Leaves pinnately 5-7-foliolate; leaflets 3-5 x 1.5-3.5 cm, ovate-elliptic. Flowers c. 4 cm across, white or blue, 1-3 together, axillary. Pods up to 10 x 1.2 cm.

On hedges and in waste places, sometimes cultivated; fairly common. Fl. & Fr.: throughout the year.

Two forms are usually seen: white-flowered and blue-flowered. An intermediate form with variegated flowers (hybrid) is also occasionally seen.

Crotalaria L.

1. Leaves simple:

2. Leaves under 3 cm long:

3. Pods hirsute

.. .. . *C. angulata*

3. Pods not hirsute

.. .. . *C. prostrata*

2. Leaves over 3.5 cm long:

4. Stipules foliaceous

.. .. . *C. verrucosa*

4. Stipules not foliaceous:

5. Leaves glabrous beneath

.. .. . *C. retusa*

5. Leaves tomentose beneath

.. .. . *C. juncea*

1. Leaves compound:

6. Leaves always 3-foliolate:

7. Pods subglobose, 2-seeded

.. .. . *C. medicaginea*

7. Pods subcylindric, many-seeded:

8. Racemes with less than 20 flowers

.. .. . *C. laburnifolia*

8. Racemes with more than 30 flowers

.. .. . *C. pallida*

6. Leaves 3-5-foliolate

.. .. . *C. quinquefolia*

Crotalaria angulata Mill. Gard. Dict. ed. 8. n.9. 1768; FTN 1:95. *C. biflora* (L.) L. Mant. Alt.570. 1771; FBI 2:66; FPM 206; Barnes 11; Munk in Reinwardtia 6:201. 1962. *Astragalus biflorus* L. Mant. Alt. 273. 1771.

Prostrate herbs. Leaves 1-2.5 x 0.7-2 cm, ovate to suborbicular, sericeous. Flowers c. 1 cm across, yellow, in leaf-opposed racemes. Pods c. 1 cm long.

A weed of open, moist places; rare. Fl. & Fr.: November-March.

Crotalaria juncea L. Sp.Pl.714. 1753; Brown 40; FBI 2:79; FPM 210; Munk 206; Pursglove, TCD 250; FTN 1:97.

Undershrubs, up to 2.5 m tall. Leaves 4-8 x 1-3 cm, oblong or oblong-elliptic. Flowers c. 3.5 cm across, yellow, in terminal racemes. Pods up to 4 x 1 cm.

Occasionally cultivated in fields, also runs wild. Fl. & Fr.: October-March.

Plants used as green manure. Stem yields fibre.

Crotalaria laburnifolia L.Sp.Pl. 715. 1753; Brown 40; FBI 2:84; FPM 213; Mayur. 84; Munk 206;FTN 1:97.

Shrubs or undershrubs, up to 2.5 m tall. Leaflets 3-6 x 2-4 cm, ovate-elliptic. Flowers c. 3.5 cm across, yellow, in lax terminal racemes. Pods up to 5 x 1 cm.

Occasionally cultivated around houses, also runs wild. Fl. & Fr.: throughout the year.

Flowers used by Hindus for worship.

Crotalaria medicaginea Lam. Encycl. 2:201. 1786; FBI 2:81; FPM 211; Mayur. 84; Munk 208; FTN 1:98.

Spreading herbs. Leaflets 8-12 x 4-6 mm, obovate to oblanceate, apex retuse. Flowers c. 1 cm across, yellow, in leaf-opposed racemes. Pods c. 5 mm across, beaked.

A weed of waysides and waste places; common. Fl. & Fr.: throughout the year.

Crotalaria pallida Dryand. in Ait. Hort. Kew. ed. 1:3:20. 1789; FTN 1:99. *C. mucronata* Desv. in J.Bot. (Desvaux) 3:76. 1814; Munk 209. *C. striata* DC. Prodr. 2:131. 1825; FBI 2:84; FPM 212.

Undershrubs, up to 1.5 m tall. Leaflets 3-7 x 1.5-4 cm, ovate or elliptic-obovate, membranous. Flowers c. 1.8 cm across, in dense terminal racemes; peduncles up to 40 cm long. Pods up to 4.5 x 1 cm.

A weed along bunds of lakes and canals; fairly common. Fl. & Fr.: October-April.

Crotalaria prostrata Rottl. ex Willd. Enum. Pl. Hort. Berol. 2:747. 1809; FBI 2:67; FPM 206; Mayur. 83; Munk 211; FTN 1:99.

Prostrate or decumbent herbs, white-sericeous. Leaves 1-2.5 x 0.5-0.8 cm, oblanceate to oblong. Flowers c. 8 mm across, yellow, in terminal racemes. Pods up to 4 x 3 mm.

A weed of marshy and moist places; common. Fl. & Fr.: November-April.

Crotalaria quinquefolia L.Sp.Pl. 716. 1753; Brown 40; FBI 2:84; FPM 213; Mayur. 84; FTN 1:100.

Herbs or undershrubs, up to 80 cm tall; stems hollow, grooved. Leaflets 4-7 x 1-2 cm, lanceate-elliptic. Flowers c. 3.5 cm across, yellow, in terminal racemes. Pods up to 6.5 x 2 cm, subcylindric.

A weed of rice fields, ditches and shallow ponds; rare. Fl. & Fr.: October-April.

Crotalaria retusa L.Sp.Pl. 715. 1753; Brown 40; FBI 2:75; FPM 207; Mayur. 83; Munk 212; FTN 1:100.

Undershrubs, up to 80 cm tall. Leaves 4-10 x 2-3 cm, elliptic-lanceate. Flowers c. 2.8 cm across, yellow, in terminal racemes. Pods up to 4 x 1 cm.

A weed of open and shady places, also in scrub jungles; common. Fl. & Fr.: October-April.

Crotalaria verrucosa L.Sp.Pl. 715. 1753; Brown 40; FBI 2:77; FPM 210; Mayur. 83; Munk 217; FTN 1:101.

Undershrubs, up to 60 cm tall; stems 4-angled. Leaves 4-8 x 3-6 cm, ovate or suborbicular, base cuneate. Flowers c. 1.5 cm across, pale blue, in terminal racemes. Pods up to 4 x 0.8 cm.

A weed of waste places, also in scrub jungles; rare. Fl. & Fr.: October-April.

Cyamopsis DC.

Cyamopsis tetragonoloba (L.) Taub. in Engler & Prantl, Pflanzenf. 3(3): 259. 1894; FPM 215; Purseglove, TCD 255; FTN 1:102. *Psoralea tetragonoloba* L.Mant.Pl.104. 1767. *Cyamopsis psoraloides* (Lam.) DC. Prodr. 2:216. 1825; Brown 41; FBI 2:92. *Dolichos psoraloides* Lam. Encycl. 2:300. 1786.

Herbs, up to 1 m tall. Leaflets 4-8 x 2-4 cm, elliptic or ovate-lanceate, margin obscurely serrate. Flowers c. 1 cm across, pale white, in short, axillary racemes. Pods up to 10 x 1.2 cm.

Commonly cultivated in kitchen gardens and in fields. Fl. & Fr.: October-April.

Dalbergia L.f. (nom.cons.)

Dalbergia lanceolaria L.f.Suppl. Pl.316. 1781; FBI 2:235; FPM 270; Mayur. 94; FTN 1:103.

Leaflets 11-17, each 2-5 x 1.5-3 cm, oblong-elliptic. Flowers c. 1 cm across, pale violet or pinkish to cream, in leafless branchlets. Fruits 1-4-seeded.

Commonly cultivated in parks and avenues, also runs wild. Plants stay without leaves during hot summer (May-June). Fl.: June-July. Fr.: throughout the year.

Derris Lour. (nom.cons.)

Leaflets retuse at apex

.. ..

D. scandens

Leaflets acuminate at apex

.. ..

D. trifoliata

Derris scandens (Roxb.) Benth. in J.Linn.Soc.Bot.4 (suppl.): 103. 1860; FBI 2:240; FPM 273; Mayur. 81; Thoth. in BBSI 3:177. 1961 & FFI 8:27. 1982; FTN 1:104. *Dalbergia scandens* Roxb. Pl. Cor.t.192. 1805.

Lianes. Leaflets usually 7, each 1.5-5 x 1-2.2 cm, obovate or suborbicular. Flowers c. 1 cm across, pale white with pinkish tinge, in dense axillary racemes. Pods elliptic.

In jungles and thickets; rare. Fl.: August-October; flowering profusely only for a few days after rains. Fr.: October-April.

Derris trifoliata Lour. Fl. Cochinch. 2:433. 1790; Thoth. in BBSI 181 & FFI 30; FTN 1:105. *D. uliginosa* (Roxb.) Benth. in Miq. Pl. Jungh. 1:252. 1852; FBI 2:241; FPM 273; Mayur. 81. *Galedupa uliginosa* Roxb. Fl.Ind. 3:243. 1832.

Lianes. Leaflets usually 3-5, each 3-7 x 1-4 cm, ovate or ovate-elliptic. Flowers c. 7 mm across, white with pinkish tinge, in axillary racemes. Pods oblong-orbicular, membranous.

In jungles near backwaters, Adayar; rare. Fl. & Fr.: December-March.

Desmodium Desv. (*nom.cons.*)

- | | | |
|--|---------|-------------------------|
| 1. Leaves simple | .. .. . | <i>D.gangeticum</i> |
| 1. Leaves 3-foliolate: | | |
| 2. Stems prostrate, rooting at nodes | .. .. . | <i>D. triflorum</i> |
| 2. Stems erect or suberect, not rooting at nodes | .. .. . | <i>D. biarticulatum</i> |

Desmodium biarticulatum (L.) F.v. Muell. *Fragm.Phyt. Austr.* 2:121. 1861; FBI 2:163; FPM 243; Mayur. 80; FTN 1:105. *Hedysarum biarticulatum* L.Sp.Pl. 747. 1753.

Stems woody. Leaflets 6-12 x 3-6 mm, obovate-oblanate, apex retuse. Flowers c. 5 mm across, purplish, in terminal racemes. Pods up to 15 x 6 mm.

A weed of waste places; rare. Fl. & Fr.: October-March.

Desmodium gangeticum (L.) DC.Prodr. 2:327. 1825; FBI 2:168; FPM 244; Mayur. 80; Van Meeuwen in *Reinwardtia* 6:249. 1962; Ohashi in *Ginkgoana* 1:184. 1973; FTN 1:106. *Hedysarum gangeticum* L.Sp.Pl. 746. 1753.

Undershrubs, up to 1 m tall. Leaves 8-14 x 4-8 cm, ovate-elliptic. Flowers c. 8 mm across, purplish, fascicled on long, terminal peduncles. Pods up to 2.2 x 0.4 cm.

A weed of waysides and waste places; fairly common. Fl. & Fr.: October-March.

Decoction of leaves consumed for arthritis. Tamil: Orilai.

Desmodium triflorum (L.) DC. Prodr. 2:334. 1825; FBI 2: 173; FPM 245; Mayur. 80; Van Meeuwen 261; Ohashi 245; FTN 1:107. *Hedysarum triflorum* L. Sp.Pl. 749. 1753.

Leaflets 7-12 x 5-9 mm, obovate, apex retuse. Flowers c. 6 mm across, purplish, axillary, solitary or 2-3 together. Pods upto 2.2 x 0.5 cm, curved.

A weed of playgrounds and waste places; common. Fl. & Fr.: September-March.

Dolichos L.

Dolichos trilobus L. Sp.Pl. 726. 1753; Verdc. in *Taxon* 17:170. 1968 & in *Kew Bull.* 24: 422. 1970; FTN 1:108. *D. falcatus* auct. non Klein ex Willd. 1802; FBI 2:211; FPM 259; Mayur. 89.

Slender twiners. Leaflets 2-3.5 x 1-2.5 cm, more or less elliptic; lobes shallow. Flowers c. 1 cm across, rosy-purple, in axillary racemes. Pods up to 3.5 x 0.6 cm.

In scrub jungles, Vandalur hills; very rare. Fl. & Fr.: October-February.

Dumasia DC.

Dumasia villosa DC. in Ann.Sci.Nat. (Paris) 4:96. 1825 & Prodr. 2:241. 1825; FBI 2:183; FPM 247; FTN 1:108.

Twining herbs. Leaflets 2.5-4 x 2-3 cm, elliptic or ovate-elliptic, tomentose. Flowers c. 7 mm across, in axillary racemes. Pods up to 3.5 x 0.5 cm.

In scrub jungles, Vandalur hills; rare. Fl. & Fr.: October-March.

Eleiotis DC.

Eleiotis sororia DC. Prodr. 2:348. 1825; FBI 2:153; FPM 235; Mayur. 80; FTN 1:108.

Prostrate herbs. Leaves 1-3-foliolate; leaflets variable, the terminal 1-1.3 x 1.2-1.4 cm, obovate-orbicular, the laterals up to 1 x 0.2 cm, linear. Flowers c. 6 mm across, brick-red. Pods up to 6 x 4 mm.

A weed of sandy seashores; rare. Branches often as long as 1.2 m. Lateral leaflets show autonomous movement. Fl. & Fr.: September-March.

Erythrina L.

Erythrina variegata L. Herb. Amboin. 10. 1754; Bullock in Kew Bull. 20:294. 1966; Kurkoff in J.Arnold Arbor. 53:132. 1972; FTN 1:109. *E. indica* Lam. Encycl. 2:391. 1786; Brown 47; FBI 2:188; FPM 249; Mayur. 86.

Leaflets 7-15 x 6-14 cm, deltoid-ovate. Flowers c. 7 cm long, scarlet, in dense racemes on leafless branches. Pods up to 20 cm long, constricted between seeds.

Commonly cultivated around houses and parks. Fl.: January-April. Fr.: March-December.

Flowers very showy. Tamil: Kalyana murungai. English: The Coral Tree.

Galactia Browne

Galactia tenuiflora (Klein ex Willd.) Wight & Arn. Prodr. 206. 1834; FBI 2:192; FPM 251; Nooteb. in Reinwardtia 5:431. 1960; FTN 1:110. *Glycine tenuiflora* Klein ex Willd. Sp.Pl. 3:1059. 1802.

Twining herbs. Leaflets 2-5 x 1.5-2.5 cm, elliptic, tomentose. Flowers c. 8 mm across, in axillary racemes. Pods up to 3.5 x 0.6 cm.

In scrub jungles; fairly common. Fl. & Fr.: September-February.

Gliricidia HBK

Gliricidia sepium (Jacq.) Kunth ex Walp. Rep. 1:679. 1842; BIT 87; FTN 1:110. *Robinia sepium* Jacq. Enum.Pl. Carib. 28.1760.

Leaves imparipinnate; leaflets 9-15, each 3-9 x 2-4 cm, ovate to elliptic. Flowers c. 2 cm across, purplish-white, in racemes on leafless branches. Pods flattened.

Commonly cultivated in gardens as an ornamental, also runs wild. Pods explode with a loud noise. Fl.: February-April. Fr.: March-May.

Leaves used as green manure.

Goniogyna DC.

Goniogyna hirta (Willd.) Ali in Taxon 16:463. 1967; FTN 1:110. *Hallia hirta* Willd. Sp.Pl. 3:1169. 1802. *Heylandia latebrosa* auct. non (L.) DC. 1825; FBI 2:65; FPM 199; Mayur.82.

Prostrate herbs. Leaves 5-10 x 3-8 mm, ovate to ovate-lanceate, base oblique. Flowers c. 8 mm across, yellow, axillary. Pods flattened.

A weed of playgrounds and waste places; fairly common. Fl. & Fr.: October-March.

Indigofera L.

- | | | |
|--|-------|--------------------------|
| 1. Leaves simple: | | |
| 2. Pods echinate | .. .. | <i>I. nummularifolia</i> |
| 2. Pods not echinate | .. .. | <i>I. linifolia</i> |
| 1. Leaves compound: | | |
| 3. Leaves sessile, palmately compound | .. .. | <i>I. aspalathoides</i> |
| 3. Leaves petiolate, pinnately compound: | | |
| 4. Leaves always 3-foliolate: | | |
| 5. Stems with white-appressed hairs | .. .. | <i>I. trita</i> |
| 5. Stems without white-appressed hairs | .. .. | <i>I. trifoliata</i> |
| 4. Leaves not always 3-foliolate: | | |
| 6. Lateral leaflets alternate: | | |
| 7. Pods more than 4-seeded | .. .. | <i>I. oblongifolia</i> |
| 7. Pods 2-seeded | .. .. | <i>I. linnaei</i> |
| 6. Lateral leaflets opposite: | | |
| 8. Leaflets 5 | .. .. | <i>I. glabra</i> |
| 8. Leaflets more than 5: | | |
| 9. Stems with viscid-glandular hairs | .. .. | <i>I. colutea</i> |
| 9. Stems without viscid-glandular hairs: | | |
| 10. Pods hirsute | .. .. | <i>I. astragalina</i> |
| 10. Pods glabrate | .. .. | <i>I. tinctoria</i> |

Indigofera aspalathoides Vahl ex DC. Prodr. 2:231. 1825; FBI 2:94; FPM 218; Mayur. 92; FTN 1:111.

Undershrubs, up to 60 cm tall. Leaflets 3-7, each 5-8 x 1-2 mm, oblanceate. Flowers c. 5 mm across, axillary, solitary. Pods up to 1.4 cm long, subterete.

A weed of barren lands and sandy seashores; rare. Fl. & Fr.: November-April.

Roots along with other medicinal herbs used for skin diseases. Tamil: Sivanaar Vaambu.

Indigofera astragalina DC. Prodr. 2:228. 1825; Gillett in Kew Bull. 14:290. 1960; FTN 1:111. *I. hirsuta* auct. non L. 1753; FBI 2:98; FPM 221; Mayur. 92.

Undershrubs, up to 1.5 m tall. Leaflets 1.5-3 x 0.8-1.7 cm, elliptic. Flowers c. 7 mm across. Pods *hirsute*.

A weed of shady places, Vandalur; rare. Fl. & Fr.: October-March.

Indigofera colutea (Burm.f.) Merr. in Philip. J.Sci. 19: 355. 1921; Gillett in Kew Bull. 24:484. 1970; FTN 1:111; Kort & Thijssse in Blumea 30(1):115. 1984. *Galega colutea* Burm.f. Fl. Ind. 172. 1768. *Indigofera viscosa* Lam. Encycl. 3:247. 1789; FBI 2:95; FPM 220; Mayur. 92.

Herbs, up to 40 cm tall. Leaflets 7-13, each 8-12 x 4-8 mm, elliptic-obovate. Flowers c. 4 mm across, in axillary racemes. Pods up to 2.5 cm long, subterete.

A weed of barren lands and sandy seashores; rare. Fl. & Fr.: October-February.

Indigofera glabra L. Sp.Pl. 751. 1753; FPM 219; Mayur. 93; FTN 1:111. *I. pentaphylla* Murr. Syst. Veg. ed. 13. 564. 1774; FBI 2:95.

Prostrate or ascending herbs. Leaflets 1-1.5 x 0.5-1.2 cm, obovate to elliptic, glabrous. Flowers c. 4 mm across, in short axillary racemes. Pods up to 2 cm long, subterete.

A weed of sandy seashores; very rare. Fl. & Fr.: October-February.

Indigofera linifolia (L.f.) Retz. Obs. Bot. 4:29. 1786; FBI 2:92; FPM 218; Mayur. 91; Ali in Bot. Not. 3:546. 1958; FTN 1:112; Kort & Thijssse 123. *Hedysarum linifolium* L.f. Suppl. Pl. 331. 1781.

Prostrate or decumbent herbs. Leaves 1.5-2.5 x 0.3-0.4 cm, linear-oblong. Flowers c. 5 mm across, in short, dense, axillary racemes. Pods c. 3 mm across, white-tomentose, 1-seeded.

A weed of roadsides and other disturbed places; fairly common. Fl. & Fr.: throughout the year.

Indigofera linnaei Ali in Bot. Not. 3:549. 1958; FTN 1:112; Kort & Thijssse 125. *I. enneaphylla* L. Mant. Alt. 272. 1771 nom. illeg.; Wood 255; FBI 2:94; FPM 218; Mayur. 92.

Prostrate herbs. Leaflets 4-8, each 4-8 x 3-5 mm, obovate. Flowers c. 5 mm across, in dense axillary corymbs. Pods up to 4 x 3 mm, oblong, 2-seeded.

A weed of playgrounds, waste places etc.; very common. Fl. & Fr.: throughout the year.

Indigofera nummularifolia (L.) Livera ex Alston in Trimen, Handb. Fl. Ceylon 6 (Suppl.):72. 1931; Gillett in Kew Bull. (Add.ser.) 1:8. 1958; FTN 1:112; Kort & Thijssse 128. *Hedysarum nummularifolium* L. Sp.Pl. 746. 1753. *Indigofera echinata* Willd. Sp.Pl. 3:1222. 1802; FBI 2:92; FPM 218.

Prostrate herbs. Leaves 1-2 x 0.6-1.5 cm, obovate. Flowers 5 mm across, in short, axillary racemes. Pods up to 10 x 6 mm, falcate, 1-seeded.

A weed of moist and marshy places, Vandalur; rare. Fl. & Fr.: October-March.

Indigofera oblongifolia Forssk. Fl. Aeg.-Arab. 137. 1775; FPM 219; Mayur. 92; Ali 546; FTN 1:112; Kort & Thijsse 129. *I. paucifolia* Del. Descr. Egypt. Hist. Nat. 251. 1812; FBI 2:97.

Undershrubs, up to 1.5 m tall. Leaflets 1-6, each 1.5-3 x 0.5-1 cm, the terminal the largest, elliptic. Flowers c. 8 mm across, in axillary racemes. Pods up to 2.2 cm long, 4-angled.

In thickets around backwaters, Ennur; very rare. Fl. & Fr.: October-March.

Indigofera tinctoria L. Sp.Pl. 751. 1753; Brown 42; FBI 2:99; FPM 220; Mayur. 93; FTN 1:113; Kort & Thijsse 137.

Undershrubs, up to 1 m tall. Leaflets 7-11-foliolate, each 15-25 x 8-13 mm, oblong-elliptic. Flowers c. 9 mm across, in axillary racemes. Pods up to 2.5 cm long.

A weed of shady places and other waste places; rare. Fl. & Fr.: September-March.

Indigofera trifoliata L. in Torner, Cent.Pl. 2:29. 1756; FBI 2:96; FPM 219; Ali 552; FTN 1:113; Kort & Thijsse 137. *I. prostrata* Willd. Sp.Pl. 3:1223. 1802; FPM 219.

Prostrate herbs; stems reddish-tinged. Leaflets 8-20 x 5-15 mm, obovate, apex retuse. Flowers c. 5 mm across, in axillary corymbs. Pods up to 2.5 cm long, 4-angled.

A weed of roadsides and other disturbed places; fairly common. Plants relished by cattle. Fl. & Fr.: August-January.

Indigofera trita L.f. Suppl.Pl. 335. 1781; Brown 42; FBI 2:96; FPM 219; Mayur. 92; Ali 558; FTN 1:113; Kort & Thijsse 139.

Prostrate or suberect undershrubs. Leaflets 10-22 x 6-18 mm, obovate, apex obtuse. Flowers c. 5 mm across, in short, axillary corymbs. Pods up to 3 cm long, subterete.

A weed of waste places; very rare. Fl. & Fr.: September-February.

Lablab Adans.

Lablab purpureus (L.) Sweet, Hort. Brit. ed. 1.481. 1827; Verdc. in Kew Bull. 24:410. 1970; FTN 1:114. *Dolichos purpureus* L. Sp.Pl. ed. 2.1021. 1763. *D. lablab* L. Sp.Pl. 725. 1753; FBI 2:209 p.p.; FPM 259; Mayur. 89.

Twining. Leaflets 4-8 x 3-6 cm, deltoid or broadly ovate, apex acuminate. Flowers c. 1.4 cm across, white or rosy-purple, in axillary racemes. Pods up to 10 x 2.2 cm.

Commonly cultivated in kitchen gardens and fields. Fl. & Fr.: November-March.

Unripe pods used as vegetable. Tamil: Avarai.

Macroptilium (Benth.) Urb.

Leaflets tomentose, 3-lobed	.. .. .	<i>M. atropurpureum</i>
Leaflets glabrate, not lobed	.. .. .	<i>M. Lathyroides</i>

Macroptilium atropurpureum (DC.) Urb. Symb. Antill. 9:452. 1928; Subba Rao & Gopalan in JBNHS 77:357. 1980; FTN 1:115. *Phaseolus atropurpureus* DC. Prodr. 2:395. 1825.

Scandent herbs. Leaflets 2-5 x 1-3 cm, lobes very shallow. Flowers c. 2 cm across, in axillary racemes. Pods up to 5 cm long.

A weed of roadsides and open fields, Vandalur; rare. Fl. & Fr.: October-March. Native of tropical America.

Macroptilium lathyroides (L.) Urb. var. *semierectum* (L.) Urb. Sym. Antill. 9:457. 1928; FTN 1:115. *Phaseolus semierectus* L. Mant. Pl.100. 1767; FBI 2:201; FPM 255; Mayur. 88.

Scandent or semierect herbs. Leaflets 4-6 x 2.5-3.5 cm, ovate-elliptic. Flowers c. 2.5 cm across, subsessile; peduncles up to 35 cm long; wing petals largest. Pods up to 8 x 0.3 cm.

A weed of moist places, Guindy; rare. Fl. & Fr.: October-March.

Flowers very showy. Native of Central and South America.

Macrotyloma (Wight & Arn.) Verdc.

Macrotyloma ciliatum (Willd.) Verdc. in Kew Bull. 24:404. 1970; FTN 1:115. *Dolichos ciliatus* Willd. Sp.Pl. 3:1049. 1802; FBI 2:10; FPM 259; Mayur. 89.

Prostrate or scandent herbs. Leaflets 3-7 x 2-4.5 cm, elliptic-ovate. Flowers c. 1.2 cm across, 3-6 together in cymose clusters. Pods up to 3.5 x 1 cm, linear-oblong.

A weed of sandy seashores, Adayar; rare. Fl. & Fr.: October-March.

Medicago L.

Medicago sativa L. Sp.Pl. 778. 1753; Brown 41; FBI 2:90; FPM 215; FTN 1:15.

Herbs, up to 50 cm tall. Leaves 3-foliolate; leaflets 2-4.5 x 0.7-1.7 cm, obovate to oblanceate, margin denticulate. Flowers c. 5 mm across, blue, in axillary, capitate racemes.

Occasionally cultivated in fields. Fl. & Fr.: throughout the year.

Plants used as fodder for cattle. English: The Lucerne.

Ormocarpum Beauv. (nom.cons.)

Ormocarpum cochinchinense (Lour.) Merr. in Philip. J.Sci. 5:76. 1910; FTN 1:116. *Diphaca cochinchinensis* Lour. Fl. Cochinch. 454. 1790. *Ormocarpum sennooides* (Willd.) DC. Prodr. 2:375. 1825; FBI 2:152; FPM 234; Mayur. 77; Gillett in Kew Bull. 20:332. 1966. *Hedysarum sennooides* Willd. Sp.Pl. 3:1207. 1802.

Shrubs, up to 3 m tall. Leaves 7-13-foliolate; leaflets 5-12 x 3-6 mm, oblong. Flowers c. 1 cm across, yellow, in axillary racemes. Pods up to 3.2 x 0.6 cm, constricted between seeds.

In scrub jungles, Vandalur hill; rare. Fl. & Fr.: September-February.

Pongamia Vent. (nom.cons.)

Pongamia pinnata (L.) Pierre, Fl. For. Cochinch. t.385. 1899; Thoth. in BBSI 3:418. 1962; FTN 1:117. *Cytisus pinnatus* L. Sp.Pl. 741. 1753. *Pongamia glabra* Vent. Jard. Mal. t.28. 1803; Brown 48; FBI 2:240; FPM 272; Mayur. 82. *Derris indica* (Lam.)Bennett in J.Bombay Nat.Hist.Soc. 68:303. 1971. *Galedupa indica* Lam. Encycl. 2:594. 1788.

Leaflets usually 5 or 7, each 5-12 x 2-6 cm, elliptic to ovate, apex acuminate. Flowers c. 1.5 cm across, pinkish, in axillary panicles. Pods c. 4 cm long, indehiscent.

Commonly cultivated in parks and avenues, also naturalized. Leaves often show insect galls. Fl.: February-May. Fr.: throughout the year. Tamil: Pungu.

Pseudarthria Wight & Arn.

Pseudarthria viscida (L.) Wight & Arn. Prodr. 209. 1834; FBI 2:154; FPM 236; Mayur. 78; FTN 1:117. *Hedysarum viscidum* L.Sp.Pl. 747. 1753.

Scandent viscid undershrubs. Leaves 3-foliolate; leaflets 2-6 x 1.5-5.5 cm, the terminal rhomboid and the laterals obovate. Flowers c. 6 mm across, rosy-pink, in fascicles on long peduncles. Pods up to 1.5 x 0.4 cm.

A weed of waysides, borders of scrub jungles etc.; common. Fl. & Fr.: October-March.

Decoction of leaves consumed for arthritis. Tamil:Moovilai.

Pterocarpus Jacq. (nom.cons.)

Inflorescences terminal	.. .. .	<i>P. marsupium</i>
Inflorescences axillary	.. .. .	<i>P. santalinus</i>

Pterocarpus marsupium Roxb. Pl.Cor.t.116. 1799; Brown 49; FBI 2:239; FPM 271; Barnes 14; Rojo, *Pterocarpus* 58. 1972; FTN 1:118.

Leaves 3-5-foliolate; leaflets 5-8 x 2-4 cm, elliptic-oblong or ovate-oblong. Flowers c. 1 cm across, yellow. Fruits c. 4 cm across.

In jungles; very rare. Fl.: August-October. Fr.: October-March.

Timber very valuable. Tamil:Vaengai.

Pterocarpus santalinus L.f. Suppl.Pl.318. 1781; FBI 2:239; FPM 274; Rojo 86; FTN 1:118.

Leaves 3-foliolate; leaflets 6-9 x 5-7.5 cm, suborbicular or broadly elliptic. Flowers c. 1.3 cm across, pale yellow. Fruits c. 5 cm across.

Commonly cultivated in forests, parks and avenues. Fl.: March-May. Fr.: throughout the year.

Timber very valuable. Tamil: Sivappu santhanam. English: The Red Sanders.

***Pycnospora* R.Br.ex Wight & Arn.**

Pycnospora lutescens (Poir.) Schind. in J.Bot. 64:145. 1926; Van Meeuwen in Reinwardtia 5:437. 1961; FTN 1:118. *Hedysarum lutescens* Poir. in Lam. Encycl. 6:417. 1805. *Pycnospora hedysaroides* R.Br. ex Baker in Hook.f.Fl.Brit.India 2:153. 1876; FPM 235.

Prostrate herbs. Leaves 3-foliolate; leaflets 1.5-3.5 x 1-2.2 cm, the terminal obovate, the laterals oblique-elliptic. Flowers c. 1 cm across, in fascicles on terminal peduncles. Pods up to 1.4 x 0.5 cm.

A weed along borders of scrub jungles; fairly common. Fl. & Fr.: October-February.

***Rhynchosia* Lour. (*nom.cons.*)**

- | | | |
|------------------------------------|---------|----------------------|
| 1. Stems twining: | | |
| 2. Pods with gland-tipped hairs | .. .. . | <i>R. viscosa</i> |
| 2. Pods without gland-tipped hairs | .. .. . | <i>R. minima</i> |
| 1. Stems not twining: | | |
| 3. Calyx lobes foliaceous | .. .. . | <i>R. rufescens</i> |
| 3. Calyx lobes not foliaceous: | | |
| 4. Stems rooting at nodes | .. .. . | <i>R. aurea</i> |
| 4. Stems not rooting at nodes: | | |
| 5. Pods septate between seeds | .. .. . | <i>R. suaveolens</i> |
| 5. Pods not septate between seeds | .. .. . | <i>R. cana</i> |

Rhynchosia aurea (Willd.) DC. Prodr. 2:386. 1825; FBI 2:221 p.p.; FPM 264; Mayur. 87; FTN 1:118. *Glycine aurea* Willd. in Ges.Naturf. Freunde Berlin Neue Schriften 4:218. 1803.

Stems prostrate, hirsute. Leaflets 1-2.2 x 1-2 cm, the terminal rhomboid-elliptic, the laterals ovate-orbicular. Flowers c. 2 cm across, yellow, in axillary corymbs. Pods up to 1 x 0.7 cm, suborbicular.

A weed of disturbed places; fairly common. Fl. & Fr.: throughout the year.

Rhynchosia cana DC. Prodr. 2:386. 1825; FBI 2:222; FPM 264; Barnes 13; FIN 1:119.

Undershrubs, up to 1 m tall. Leaflets 1-3.5 x 0.8-3 cm, the terminal rhomboid-elliptic and the laterals oblique-ovate. Flowers c. 1 cm across, yellow. Pods up to 1.3 x 0.7 cm.

A weed along borders of scrub jungles; rare. Fl. & Fr.: throughout the year.

Rhynchosia minima (L.) DC. Prodr. 2:385. 1825; FBI 2:223; FPM 264; Mayur. 88; Van Meeuwen in Reinwardtia 5:439. 1961; Verdc. in Kew Bull. 25:102. 1971; FTN 1:119. *Dolichos minimus* L. Sp.Pl. 726. 1753.

Stems glabrate. Leaflets 1.5-2 x 1.2-1.7 cm, the terminal rhomboid-elliptic, the laterals ovate-elliptic or obovate. Flowers c. 1 cm across, yellow, in long, lax racemes. Pods up to 1.2 x 0.7 cm.

A weed of waste places; rare. Fl. & Fr.: throughout the year.

Rhynchosia rufescens (Willd.) DC. Prodr. 2:387. 1825; FBI 2:220; FPM 263; Barnes 12; Van Meeuwen 439; FTN 1:119. *Glycine rufescens* Willd. in Ges. Naturf. Freunde Berlin Neue Schriften 4:222. 1803.

Rambling undershrubs. Leaflets 2-4 x 1.5-3 cm, the terminal rhomboid-elliptic, the laterals oblique-ovate. Flowers c. 8 mm across, in axillary racemes. Pods up to 1.3 x 0.7 cm.

In scrub jungles and shady places; rare. Fl. & Fr.: October-February.

Rhynchosia suaveolens (L.f.) DC. Prodr. 2:387. 1825; FBI 2:221; FPM 264; Barnes 13; FTN 1:120. *Glycine suaveolens* L.f. Suppl. Pl. 326. 1781.

Scandent or semierect undershrubs, up to 60 cm tall. Leaflets 3-5.5 x 1.5-3.5 cm, ovate, glandular-pubescent. Flowers c. 8 mm across, in axillary racemes. Pods up to 1.5 x 0.8 cm.

A weed of jungles and thickets. Fl. & Fr.: November-March.

Rhynchosia viscosa (Roth) DC. Prodr. 2:387. 1825; FBI 2:225; FPM 265; Mayur. 87; Van Meeuwen 441; Verdc. 85; FTN 1:120. *Glycine viscosa* Roth, Nov. Pl. Sp. 349. 1821.

Leaflets 3, each 6-9 x 6-10 cm, the terminal deltoid or ovate-rhomboid and the laterals ovate. Flowers c. 2 cm across, yellow, in axillary racemes. Pods up to 2.8 x 1 cm.

In scrub jungles and hedges; fairly common. The whole plant glandular-pubescent. Leaflets with yellow glands beneath. Fl. & Fr.: October-April.

Rothia Pers. (nom.cons.)

Rothia indica (L.) Druce in Bot. Club Soc. Brit. Isles 3:423. 1914; FTN 1:120. *Trigonella indica* L.Sp.Pl.778. 1753. *Rothia trifoliata* (Roth) Syn. 2:302. 1807; Brown 41; FBI 199; Mayur. 82. *Dillwynia trifoliata* Roth, Cat. Bot. 3:71. 1806.

Prostrate herbs. Leaflets 8-17 x 4-10 mm, oblong-oblancheate, sericeous. Flowers c. 5 mm across, solitary or a few together, axillary. Pods up to 5 x 0.5 cm, sericeous.

A weed of lawns and playgrounds; fairly common. Fl. & Fr.: October-February.

Sesbania Scop. (nom.cons.)

- | | | |
|----------------------------------|---------|-----------------------|
| 1. Herbs | .. .. . | <i>S. procumbens</i> |
| 1. Trees, shrubs or undershrubs: | | |
| 2. Stems with minute prickles | .. .. . | <i>S. bispinosa</i> |
| 2. Stems without prickles: | | |
| 3. Flowers over 4 cm across | .. .. | <i>S. grandiflora</i> |
| 3. Flowers under 2.5 cm across | .. | <i>S. sesban</i> |

Sesbania bispinosa (Jacq.) W.F.Wight in U.S.D.A. Bur. Pl. Industr. Bull. 137:15. 1909; Gillett in Kew Bull. 17:129. 1963; FTN 1:120. *Aeschynomene bispinosa* Jacq. Ic.Pl.Rar. 3:5. 564. 1792. *Sesbania aculeata* (Willd.) Poir. in Lam. Encycl. 7:128. 1806 p.p.; FBI 2:114; FPM 228; Mayur. 90. *Coronilla aculeata* Willd..Sp.Pl. 3:1147. 1802.

Shrubs or undershrubs, up to 2 m tall; stems fistular. Leaves unipinnate; leaflets 20-25 pairs, each 1-2 x 0.4-0.5 cm, oblong. Flowers c. 2 cm across, yellow with purplish dots, in axillary pendulous racemes. Pods up to 25 x 0.4 cm.

Occasionally cultivated in rice fields to enrich soil fertility (root-nodule nitrogen fixation), also runs wild. Fl. & Fr.: October-April.

Whole plant used as green manure.

Sesbania grandiflora (L.) Poir. in Lam. Encycl. 7:127. 1806; FBI 2:115; FPM 228; Mayur. 91; Gillett 105; FTN 1:120. *Robinia grandiflora* L.Sp.Pl. 722. 1753.

Trees, up to 8 m tall. Leaves unipinnate; leaflets 20-30 pairs, each 2.5-5.5 x 1-2 cm, oblong. Flowers 10-13 cm across, white or purplish-red, in axillary racemes. Pods up to 25 x 0.7 cm.

Commonly cultivated in field and kitchen gardens. Fl.: December-April. Fr.: January-June.

Leaves used as greens. Tamil: Agatthi.

Sesbania procumbens (Roxb.) Wight & Arn. Prodr. 215. 1834; FBI 2:115; FPM 228; Barnes 11; Gillett 131; FTN 1:120. *Aeschynomene procumbens* Roxb. Fl. Ind. 3:337. 1832.

Stems prostrate or suberect, minutely prickly. Leaflets 20-30 pairs, each 4-7 x 2-3 mm, oblong, glaucous. Flowers c. 5 mm across, yellow, solitary or in pairs, axillary. Pods up to 9 cm long, subterete.

A weed of ditches, rice fields, shallow pools etc.; fairly common. Fl. & Fr.: November-April.

Often confused with species of *Aeschynomene*, but readily distinguished by the subterete pods.

Sesbania sesban (L.) Merr. in Philipp.J.Sci. 7:235. 1912; Gillette 112; FTN 1:120. *Aeschynomene sesban* L.Sp.Pl. 714. 1753. *Sesbania aegyptiaca* (Poir.) Pers.Syn. 2:316. 1807; Brown 42; FBI 2:114; FPM 228; Mayur. 90. *Sesban aegyptiacus* Poir. in Lam.Encycl. 7:128. 1806.

Shrubs or trees, up to 6 m tall. Leaves unipinnate; leaflets 6-13 pairs, each 10-13 x 4-6 mm, oblong. Flowers c. 1.3 cm across, purplish-red, in axillary racemes. Pods up to 15 x 0.3 cm.

Occasionally cultivated in gardens. Fl.: December-April. Fr.: throughout the year. Tamil: Chitthagatthi.

Stylosanthes Sw.

Stylosanthes fruticosa (Retz.) Alston in Trimen, Handb. Fl. Ceylon 6(Suppl.):77. 1931; Nooteb. in Reinwardtia 5:449. 1961; Verdc. in Kew Bull. 24:59. 1970; FTN 1:122. *Arachis fruticosa* Retz. Obs. Bot. 5:26. 1786. 1789. *Stylosanthes mucronata* Willd. Sp.Pl. 3:1166. 1802; FBI 2:148; FPM 230; Mayur. 76.

Undershrubs, up to 50 cm tall. Leaflets 8-12 x 3-5 mm, elliptic. Flowers c. 7 mm across, sessile, capitate. Pods c. 4 mm long.

A weed of waste places and borders of scrub jungles; fairly common. Fl. & Fr.: throughout the year.

Hypanthium filiform, often mistaken for pedicel. Pistil sessile, hidden deep in the hypanthium.

Tephrosia Pers. (nom.cons.)

- | | | |
|-------------------------------|---------|--------------------|
| 1. Leaves simple | .. .. . | <i>T. strigosa</i> |
| 1. Leaves pinnately compound: | | |
| 2. Pods falcate, villous | .. .. . | <i>T. villosa</i> |
| 2. Pods linear, not villous: | | |
| 3. Corolla rosy-purple: | | |
| 4. Flowers c. 8 mm across | .. .. . | <i>T. purpurea</i> |
| 4. Flowers c. 13 mm across | .. .. . | <i>T. maxima</i> |
| 3. Corolla white | .. .. . | <i>T. pumila</i> |

Tephrosia maxima (L.) Pers.Syn. 2:329. 1807; FPM 225; Mayur. 94; FTN 1:123. *T. purpurea* (L.) Pers. var. *maxima* (L.) Baker in Hook.f.Fl.Brit. India 2:113. 1876. *Galega maxima* L. Syst.Mat.ed.10.1172. 1759.

Suberect undershrubs, up to 40 cm tall. Leaflets 12-23 x 5-10 mm, obovate-oblanate. Flowers in axillary racemes; styles bearded. Pods up to 6.5 x 0.7 cm, glabrescent.

A weed of waysides along scrub jungles; rare. Fl. & Fr.: August-December.

Tephrosia pumila (Lam.) Pers.Syn. 2:330. 1807; Ali in Biologia (Lahore) 10:27. 1964; Bosman & Haas in Blumea 28:461. 1983; FTN 1:123. *Galega pumila* Lam. Encycl. 2:599. 1788. *Tephrosia purpurea* (L.) Pers. var. *pumila* (Lam.) Baker in Hook.f.Fl.Brit.India 2:113. 1876. *T. procumbens* Buch.-Ham.ex. Drumm. in Gamble & Fischer, Fl.Pres. Madras 318. 1918 & 226. 1957 (repr.ed.); Mayur. 93.

Prostrate herbs. Leaflets 7-15, each 6-20 x 4-6 mm, oblanceate. Flowers c. 1 cm across, in extra-axillary racemes. Pods up to 3.5 x 0.5 cm, pilose.

A weed of lawns and playgrounds; fairly common. Fl. & Fr.: August-January.

Tephrosia purpurea (L.) Pers. Syn. 2:329. 1807; Wood 255; FBI 2:112 p.p.; FPM 226; Mayur. 94; Ali 29; Bosman & Hass 464; FTN 1:123. *Cracca purpurea* L.Sp.Pl. 752. 1753.

Undershrubs, up to 60 cm tall; stems red-tinged. Leaflets 9-13, each 8-16 x 5-10 mm, obovate-oblanate. Flowers c. 8 mm across, in extra-axillary racemes. Pods up to 5 x 0.6 cm.

A weed of waste places, also along sandy seashores; common. Fl. & Fr.: throughout the year. Tamil:Kaattu Kolinji.

Tephrosia strigosa (Dalz.) Santapau & Mahesh. in J. Bombay Nat.Hist.Soc. 54:804. 1957; FTN 1:Addenda page 2. *Macronyx strigosus* Dalz. in Hook. Kew Journ. 2.35. 1850. *Tephrosia tenuis* Wall. ex Dalz. & Gibs. Bomb. Fl. 61. 1861; FBI 2:111; FPM 224.

Prostrate herbs; stems filiform. Leaves 3-6 x 0.3-0.5 cm, linear. Flowers c. 5 mm across, axillary. Pods up to 2.5 x 0.4 cm, linear.

A weed of shady places, often hidden among grasses, Tambaram; rare. Fl. & Fr.: July-September.

Tephrosia villosa (L.) Pers. Syn. 2:329. 1807; FBI 2:113; Bosman & Hass 476; FTN 1:123. *Cracca villosa* L. Sp.Pl. 752. 1753. *Tephrosia hirta* (Buch.-Ham.) Gamble in Gamble & Fischer, Fl. Pres. Madras 318. 1918 & 225. 1957 (repr.ed.); Mayur. 93. *Galega hirta* Buch.-Ham. in Trans. Linn. Soc. London 13:546. 1822.

Undershrubs, up to 50 cm tall; stems white-tomentose. Leaflets 9-15, each 8-14 x 3-8 mm, oblanate-obovate. Flowers c. 1.2 cm across, rosy-purple, in terminal racemes. Pods up to 3.5 x 0.6 cm.

A weed of waysides and waste places; common. Fl. & Fr.: August-February.

Teramnus Browne

Teramnus labialis (L.f.) Spreng. Syst. Veg. 3:235. 1826; FBI 2:184; FPM 249; Mayur. 85; Verdc. in Kew Bull. 24:266. 1970; FTN 1:123. *Glycine labialis* L.f. Suppl. Pl.325. 1781.

Twining herbs. Leaflets 3, each 2-3.5 x 1-2.5 cm, the terminal elliptic and the laterals ovate-elliptic. Flowers c. 3.5 mm across, rosy-purple, in axillary racemes. Pods up to 4.5 x 0.5 cm, linear, beak abruptly curved.

In thickets and on hedges; fairly common. Fl. & Fr.: September-March.

Vigna Savi

- | | | |
|---|-------|---|
| 1. Stems prostrate, rooting at nodes | .. .. | <i>V. trilobata</i> |
| 1. Stems not prostrate, not rooting at nodes: | | |
| 2. Pods over 12 cm long | .. .. | <i>V. uniuiculata subsp. cylindrica</i> |
| 2. Pods under 10 cm long: | | |
| 3. Seeds black | .. .. | <i>V. mungo</i> |
| 3. Seeds green | .. .. | <i>V. radiata</i> |

Vigna mungo (L.) Hepper in Kew Bull. 11:128. 1956; Verdc. in Kew Bull. 24:558. 1970; FTN 1:125. *Phaseolus mungo* L. Mant. Pl. 101. 1767; Brown 46; FBI 2:313; FPM 256. *P. radiatus* auct.non L. 1753; Mayur. 88.

Suberect or scandent herbs. Leaves 4-10 x 2-5 cm, lanceate-ovate, pubescent, apex acute to acuminate. Flowers c. 1.2 cm across, pale yellow, capitate on axillary peduncles. Pods up to 4.5 x 0.5 cm.

Occasionally cultivated in fields. Fl. & Fr.: October-April.

Seeds used in various food preparations. Tamil: Ulundhu. English: The Black Gram.

Vigna radiata (L.) Wilczek in Fl. Congo Belge 6:386. 1954; Verdc. 558; FTN 1:126. *Phaseolus radiatus* L. Sp.Pl. 725. 1753; FPM 256. *P. mungo* L. var. *radiatus* (L.) Baker in Hook.f.Fl. Brit. India 2:203. 1876. *P.mungo* auct. non L. 1767; Mayur.88.

Herbs, up to 50 cm tall. Leaves 3-foliolate; leaflets 5-10 x 4-8 cm, hirsute, the terminal deltoid-ovate and the laterals obliquely ovate. Flowers c. 1.3 cm across, pale yellow, capitate on axillary peduncles. Pods up to 9 x 0.6 cm, hirsute.

Occasionally cultivated in fields. Fl. & Fr.: January-April.

Seeds used in several food preparations. Tamil: Paasippayiru, Pachchappayiru. English: The Green Gram.

Vigna trilobata (L.) Verdc. in Taxon 17:172. 1968 & in Kew Bull. 24:560. 1970; FTN 1:126. *Dolichos trilobatus* L. Mant. Pl. 101. 1767. *Phaseolus trilobus* auct. non Ait. 1789; Brown 46; FBI 2:201; FPM 256; Mayur. 88.

Herbs with filiform stems. Leaflets 2-3.5 x 1-2 cm, rhomboid, 3-lobed. Flowers c. 6 mm across, yellow, capitate on long, axillary peduncles. Pods up to 5 x 0.3 cm.

A weed of waysides and open grounds; fairly common. Fl. & Fr.: October-March. Tamil: Panippayaru.

Vigna unguiculata (L.) Walp. Repert. 1:779. 1842 subsp. *cylindrica* (L.) Eselt. in Hedrick. Vegetables New York 1(2):11. 1931; Verdc. in Kew Bull. 24:544. 1970; FTN 1:126. *Phaseolus cylindricus* L. Herb. Amb. 23. 1754. *Vigna catjang* (Burm.f.) Walp. in Linnaea 13:533. 1839; FPM 258. *Dolichos catjang* Burm.f.Fl. Ind.161. 1768.

Climbing herbs. Leaflets 7-12 x 5-8 cm, ovate, the laterals oblique at base. Flowers c. 2 cm across, pale white, in axillary racemes. Pods up to 25 x 0.5 cm, subterete.

Commonly cultivated in kitchen gardens and in fields. Fl. & Fr.: October-March.

Unripe fruits used as vegetable; seeds also cooked and eaten. Tamil: Kaaraamani.

Zornia Gmel.

Zornia gibbosa Span. in Linnaea 15:192. 1841; Mohl. in Webbia 16:112. ff.44 & 76. 1961; Wagh in JBNHS 61:214. 1964; Ravi in BBSI 21:199. 1979; FTN 1:127. *Z. diphylla* auct. non (L.) Pers. 1807; FBI 2:147 p.p.; FPM 229 p.p.; Mayur. 76.

Prostrate herbs. Leaflets 15-25 x 5-10 mm, lanceate, gland-dotted. Flowers c. 5 mm across, yellow, enclosed between pairs of leafy bracteoles, in terminal spikes. Pods constricted, echinate.

A weed of waysides and waste places; common. Fl. & Fr.: October-April.

Lathyrus L.

Lathyrus sativus L. Sp.Pl. 730. 1753; FBI 2:179; FPM 246; Mayur. 86.

Mayuranathan records this, perhaps cultivated.

Melilotus Juss.

Melilotus indica (L.) All.Fl.Pedem. 1:308. 1875; FPM 215; Mayur. 81; FTN 1:115. *Trifolium indicum* L.Sp.Pl. 765. 1753. *Melilotus parviflora* Desf. Fl. Atlant. 2:192. 1799; FBI 2:89.

Mayuranathan records this as a weed of cultivated fields.

Psoralea L.

Psoralea corylifolia L.Sp.Pl. 764. 1753; FBI 2:103; FPM 222; Mayur. 81; FTN 1:117.

Mayuranathan records this, perhaps cultivated.

Trigonella L.

Trigonella foenum-graecum L.Sp.Pl. 777. 1753; Brown 41; FBI 2:87; FPM 215; Mayur. 94.

Cultivated. Tamil: Venthayam. English: The Fenugreek.

CAESALPINIACEAE

- | | | |
|--------------------------------|-------|--------------------|
| 1. Leaves simple | .. .. | <i>Bauhinia</i> |
| 1. Leaves compound: | | |
| 2. Styles winged in fruit | .. .. | <i>Pterolobium</i> |
| 2. Styles not winged in fruit: | | |
| 3. Twigs with phyllodes | .. .. | <i>Parkinsonia</i> |
| 3. Twigs without phyllodes: | | |
| 4. Leaves bipinnate: | | |
| 5. Sepals valvate | .. .. | <i>Delonix</i> |
| 5. Sepals imbricate: | | |
| 6. Pods winged along margins | .. .. | <i>Peltophorum</i> |
| 6. Pods not winged | .. .. | <i>Caesalpinia</i> |
| 4. Leaves unipinnate: | | |
| 7. Petals absent | .. .. | <i>Saraca</i> |
| 7. Petals present: | | |
| 8. Fertile stamens 3 | .. .. | <i>Tamarindus</i> |
| 8. Fertile stamens 5 or more | .. .. | <i>Cassia</i> |

Bauhinia L.

1. Petals under 2 cm long	.. .. .	<i>B. racemosa</i>
1. Petals over 3 cm long:		
2. Corolla yellow	.. .. .	<i>B. tomentosa</i>
2. Corolla white or pinkish:		
3. Fertile stamens 3	.. .. .	<i>B. purpurea</i>
3. Fertile stamens 5 or 10:		
4. Fertile stamens 5	.. .. .	<i>B. variegata</i>
4. Fertile stamens 10	.. .. .	<i>B. acuminata</i>

Bauhinia acuminata L. Sp.Pl. 375. 1753; Brown 53; FBI 2:276; FPM 289; Mayur. 96; de Wit in Reinwardtia 3:393. 1956; FTN 1:127.

Shrubs or trees, up to 4 m tall. Leaves 7-15 x 6-12 cm, base subcordate, apex obcordate. Flowers 5-6 cm across, white, in terminal corymbs. Pods upto 10 x 1.7 cm, oblanceate.

Occasionally cultivated in gardens as an ornamental. Fl. & Fr.: November-April.

Bauhinia purpurea L.Sp.Pl. 375. 1753; Brown 53; FBI 2:284; FPM 288; Mayur. 96; de Wit 406; FTN 1:127.

Trees, up to 8 m tall. Leaves 7-17 x 8-18 cm, orbicular, base cordate and 11-veined, apex obcordate. Flowers 6-8 cm across, rosy-pink, in terminal corymbs. Pods up to 25 x 2.5 cm.

Commonly cultivated in gardens and avenues, also naturalized. Fl.: December-March. Fr.: February-May.

Flowers showy. Tamil:Manthaarai.

Bauhinia racemosa Lam. Encycl. 1:390. 1785; FBI 2:276; FPM 288; Mayur. 96; de Wit 537; FTN 1:128. - Plate 11 A-G.

Trees, up to 6 m tall. Leaves 3.5-6 x 4-6.5 cm, suborbicular, base cordate and 9-veined, apex obcordate. Flowers c.1.5 cm across, pale white, in terminal racemes. Pods up to 22 x 2.5 cm.

In scrub jungles; fairly common. Fl.: April-May. Fr.: throughout the year. Tamil:Kokkumanthaarai.

Bauhinia tomentosa L.Sp.Pl. 375. 1753; Brown 54; FBI 2:275; FPM 288; Mayur. 95; de Wit 409; FTN 1:128.

Shrubs or small trees, up to 4 m tall. Leaves 4-7 x 4.5 - 7.5 cm base cordate, apex obcordate. Flowers 5-7 cm, across, in terminal corymbs. Pods up to 12 x 1.5 cm, oblong.

Commonly cultivated in gardens as an ornamental, also runs wild. Fl. & Fr.: throughout the year.

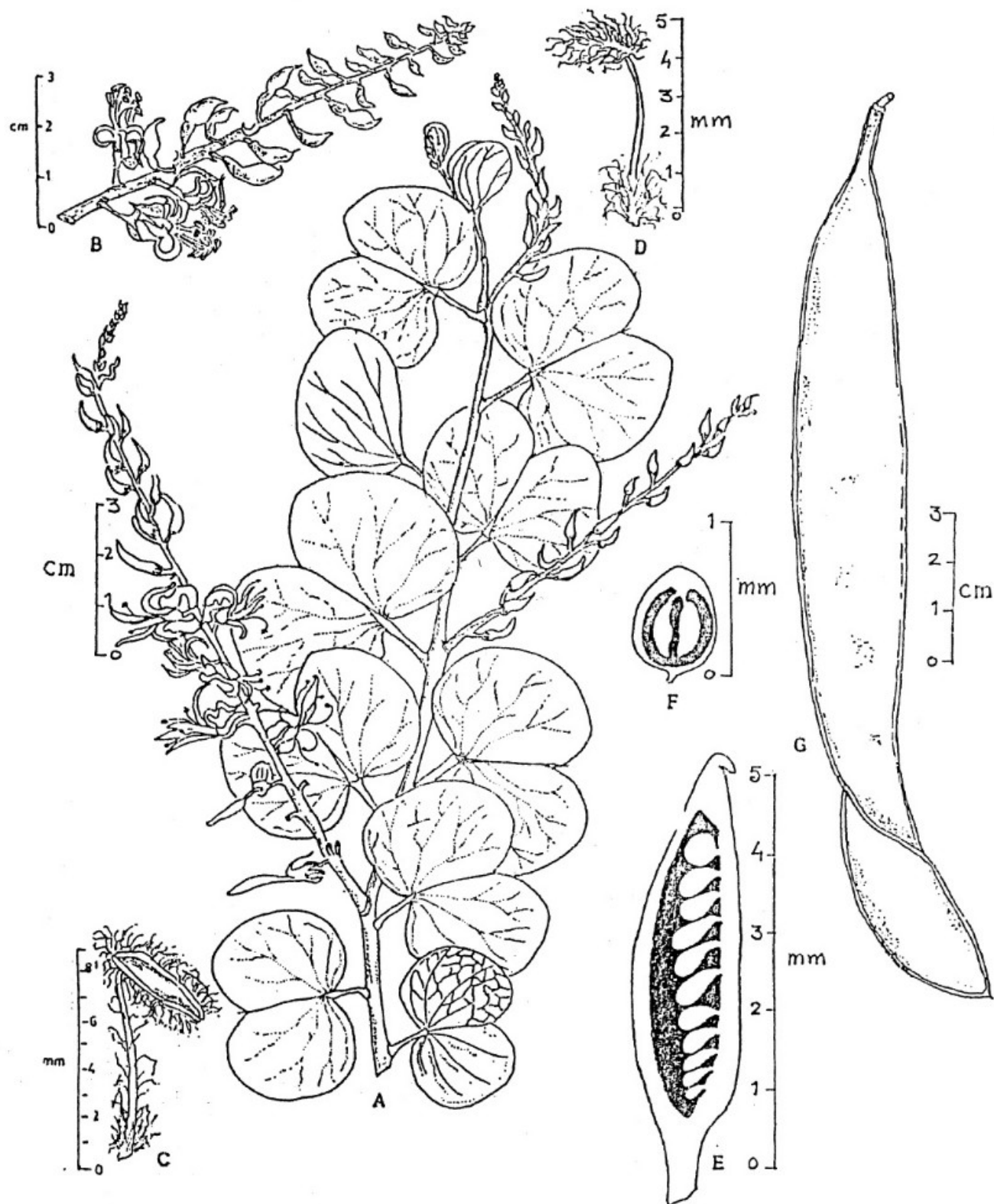


PLATE 11: *Bauhinia racemosa* Lam. A - Twig with pistillate flowers. B - Inflorescence with bisexual flowers. C - Stamen. D - Staminode. E - L.S. of gynoecium. F - C.S. of ovary. G - Fruit.

Bauhinia variegata L. Sp.Pl. 375. 1753; Brown 53; FBI 2:284; FPM 288; Mayur. 96; de Wit 411; FTN 1:128.

Shrubs, up to 5 m tall. Leaves 4-9 x 4.5-10 cm, suborbicular, base cordate, apex obcordate. Flowers 5-7 cm across, rosy-pink, in terminal racemes; odd petal often variegated. Pods up to 18 x 2 cm.

Occasionally cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year. Tamil: Sigappu Manthaarai.

Caesalpinia L.

- | | | |
|--|---------|-----------------------|
| 1. Straggling shrubs or woody climbers | .. .. . | <i>C. bonduc</i> |
| 1. Erect shrubs or trees: | | |
| 2. Flowers under 1 cm across | .. .. . | <i>C. coriaria</i> |
| 2. Flowers over 2 cm across | .. .. . | <i>C. pulcherrima</i> |

Caesalpinia bonduc (L.) Roxb. Fl. Ind. 2:362. 1824 emend. Dandy & Exell in J. Bot. 76:175. 1938; FTN 1: Addenda page 2. *Guilandina bonduc* L. Sp.Pl. 381. 1753; Wood 258. *Caesalpinia crista* L. Sp.Pl. 380. 1753; FPM 278; Mayur. 97; FTN 1:128. *C. bonducella* (L.) Fleming in Asiat. Res. 11:159. 1810; FBI 2:254; BICS 57. *Guilandina bonducella* L. Sp.Pl. ed. 2:545. 1762.

Twigs densely prickly. Pinnae 6-8 pairs; leaflets 1.5-4 x 1-2 cm, oblong or elliptic-oblong. Flowers c. 8 mm across, yellow, in long-peduncled racemes. Pods up to 6 x 4 cm.

In jungles along sandy seashores and barren lands; rare. Fl. & Fr.: August-February.

Caesalpinia coriaria (Jacq.) Willd. Sp.Pl. 2:532. 1799; Brown 50; FPM 279; Mayur. 97; BICS 64; FTN 1:128. *Poinciana Coriaria* Jacq. Select. Am. 123.t.175.f.36. 1781.

Shrubs or trees, up to 6 m tall. Pinnae 7-11; leaflets 4-10 x 1-2 mm, linear-oblong, base oblique. Flowers c. 5 mm across, in axillary corymbs. Pods up to 3.5 x 1.5 cm, curved.

Commonly cultivated in gardens, also runs wild. Leaflets often dotted beneath (fungal pycnidia). Fl.: March-September. Fr.: throughout the year.

Pods yield tannin. Tamil: Ingi maram. English: The Diwi Diwi. Native of South America.

Caesalpinia pulcherrima (L.) Sw. Obs. Bot. 166. 1791; FBI 2:255; FPM 279; Mayur. 97; BICS 56; FTN 1:129. *Poinciana pulcherrima* L. Sp.Pl. 380. 1753; Brown 50.

Shrubs with scattered prickles, up to 5 m tall. Pinnae 6 pairs; leaflets 8-16 x 5-8 mm, oblong to oblanceate. Flowers 3-4 cm across, yellow or red, in terminal racemes or corymbs. Pods up to 9 x 1.7 cm.

Commonly cultivated in gardens as an ornamental, also runs wild. Fl. & Fr.: throughout the year. Tamil: Mayil Konrai. English: The Peacock Flower. Native of tropical America.

Cassia L.

- | | | |
|--|---------|------------------------|
| 1. Pods winged | .. .. . | <i>C. alata</i> |
| 1. Pods not winged: | | |
| 2. Herbs or undershrubs: | | |
| 3. Leaves with 2 pairs of leaflets | .. .. . | <i>C. absus</i> |
| 3. Leaves with 3 or more pairs of leaflets: | | |
| 4. Leaves and pods hirsute | .. .. . | <i>C. hirsuta</i> |
| 4. Leaves and pods not hirsute: | | |
| 5. Leaflets under 7 mm wide: | | |
| 6. Stamens 5 | .. .. . | <i>C. pumila</i> |
| 6. Stamens 10 | .. .. . | <i>C. mimosoides</i> |
| 5. Leaflets over 1 cm wide: | | |
| 7. Leaflets obtuse-mucronate at apex | .. .. . | <i>C. tora</i> |
| 7. Leaflets acute to acuminate at apex: | | |
| 8. Leaves with 3-5 pairs of leaflets | .. .. . | <i>C. occidentalis</i> |
| 8. Leaves with 5-10 pairs of leaflets | .. .. . | <i>C. sophera</i> |
| 2. Shrubs or trees: | | |
| 9. Pods cylindrical: | | |
| 10. Flowers yellow | .. .. . | <i>C. fistula</i> |
| 10. Flowers pinkish: | | |
| 11. Inflorescences on old stems, terminal | .. .. . | <i>C. javanica</i> |
| 11. Inflorescences on young twigs, axillary | .. .. . | <i>C. roxburghii</i> |
| 9. Pods flattened: | | |
| 12. Leaves with 4-6 pairs of leaflets | .. .. . | <i>C. surattensis</i> |
| 12. Leaves with 8 or more pairs of leaflets: | | |
| 13. Shrubs; pods under 12 cm long: | | |
| 14. Stipules foliaceous | .. .. . | <i>C. auriculata</i> |
| 14. Stipules not foliaceous | .. .. . | <i>C. montana</i> |
| 13. Trees; pods over 15 cm long | .. .. . | <i>C. siamea</i> |

Cassia absus L.Sp.Pl. 376. 1753; Wood 258; FBI 2:265; FPM 285; Mayur. 103; de Wit in Webbia 11: 279. 1955; FTN 1:129.

Leaves pinnate; leaflets 3.5-5.5 x 2.5-3.5 cm, obovate-elliptic, base oblique; apex emarginate. Flowers c. 1 cm across, pink or yellow, in terminal racemes. Pods up to 4 x 0.6 cm, oblong, glandular-pubescent.

A weed of waysides and waste places; fairly common. Fl. & Fr.: October-February.

Cassia alata L.Sp.Pl. 378. 1753; Brown 52; FBI 2:264; FPM 286; Mayur. 102; de Wit 231; FTN 1:129.

Shrubs, up to 3 m tall. Leaflets 8-14 pairs, each 6-12 x 3-7 cm, ovate-oblong. Flowers c. 3 cm across, yellow, in terminal dense racemes; bracts petaloid, caducous. Pods up to 16 x 2.2 cm.

Occasionally cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year. Native of South America.

Cassia auriculata L.Sp.Pl.379. 1753; Brown 53; FBI 2:263; FPM 284; Mayur. 102; de Wit 234; FTN 1:129.

Shrubs, up to 5 m tall. Leaves paripinnate; leaflets 7-8 pairs, each 1.3-2.5 x 0.6-1.2 cm, oblong to elliptic-oblong. Flowers c. 4 cm across, yellow, in terminal and axillary corymbs. Pods up to 12 x 1.8 cm.

In scrub jungles and thickets; common. Rachis with orange-red, stalked glands. Fl.: January-May. Fr.: February-July.

Petals eaten raw or cooked, for better eye-sight. Tamil:Aavaaram.

Cassia fistula L.Sp.Pl. 377. 1753; FBI 2:261; FPM 283; Mayur. 101; de Wit 207; FTN 1:129.

Leaflets 4-7-pairs, each 5-20x3-9 cm, ovate-lanceate or ovate. Flowers c. 5 cm across, yellow, in long, pendulous racemes. Pods up to 45 x 1.7 cm.

Commonly cultivated in gardens and avenues as an ornamental, also runs wild. Fl.: April-June. Fr.: throughout the year.

Cassia hirsuta L.Sp.Pl. 378. 1753; FPM 284; Mayur. 101; de Wit 250; FTN 1:129.

Undershrubs, up to 70 cm tall. Leaflets 4-10 x 2-5 cm, lanceate-ovate. Flowers c.2.5 cm across, yellow, in axillary corymbs. Pods up to 12 x 0.6 cm.

A weed of waste places; rare. Fl. & Fr.: August-December. Native of tropical America.

Cassia javanica L.Sp.Pl.379. 1753; de Wit 214; FTN 1:130.

Leaflets 6-13 pairs, each 2.5-4 x 1.5-2.5 cm, oblong-elliptic. Flowers c. 3.5 cm across, pinkish, in corymbs. Pods up to 35 x 2.2 cm.

Commonly cultivated in gardens and avenues as an ornamental and for shade. Fl.: June-August. Fr.: throughout the year.

Cassia mimosoides L.Sp.Pl. 379. 1753; FBI 2:266; FPM 285; Mayur. 103; de Wit 283; FTN 1:130.

Prostrate or suberect herbs. Leaflets 20-40 pairs, each 3-5 x 1-2 mm, linear; gland on rachis sessile. Flowers c. 1.5 cm across, yellow, axillary. Pods up to 5 x 0.5 cm.

A weed of moist and marshy places; fairly common. Fl. & Fr.: September-February.

Cassia montana Heyne ex Roth, Nov. Pl.Sp. 214. 1821; FBI 2:264; FPM 284; Mayur. 102; FTN 1:130.

Shrubs, up to 4 m tall. Leaves paripinnate; leaflets c. 10 pairs, each 2-5 x 1-1.8 cm, oblong. Flowers c. 4 cm across, yellow, in terminal panicate corymbs. Pods up to 11 x 1.7 cm.

In scrub jungles; common. Fl. & Fr.: throughout the year.

Cassia occidentalis L.Sp.Pl. 377. 1753; FBI 2:262; FPM 284; Mayur. 101; de Wit 256; FTN 1:130.

Leaflets 4-10 x 2-3.5 cm, lanceate-elliptic, base oblique. Flowers c. 2 cm across, yellow, 2-3 together in axillary corymbs. Pods up to 12 x 0.5 cm, linear.

A weed of roadsides and waste places; very common. Fl. & Fr.: throughout the year. Tamil: Paeyavarai.

Cassia pumila Lam. Encycl. 1:651. 1785; FBI 2:266; FPM 285; Mayur. 103; de Wit 288; FTN 1:130.

Prostrate herbs. Leaflets 10-20 pairs, each 2-4 x 0.5-1 mm, linear; gland on rachis stipitate. Flowers c. 5 mm across, solitary, supra-axillary. Pods up to 2.5 x 0.5 cm, oblong.

A weed of open grounds; fairly common. Fl. & Fr.: July-October.

Cassia roxburghii DC. Prodr. 2:489. 1825; de Wit 226; FTN 1:130. *C. marginata* Roxb. Fl. Ind. 2:338. 1824; FBI 2:262; FPM 284; Mayur. 101.

Trees, upto 8 m tall. Leaflets 2-3 x 1-1.5 cm, oblong. Flowers c. 2 cm across. Pods upto 35 x 1.5 cm.

Commonly cultivated in gardens and avenues as an ornamental and also for shade. Fl.: June-October. Fr.: throughout the year.

Cassia sophora L.Sp.Pl.379. 1753; Brown 52; FBI 2:262; FPM 284; Mayur. 102; de Wit 265; FTN 1:131.

Leaflets 3.5-7 x 1.3-2 cm, lanceate, base oblique. Flowers c. 2 cm across, yellow, 2-3 together in axillary corymbs. Pods up to 11 x 0.5 cm, linear.

A weed of roadsides; rare. Fl. & Fr.: August-February.

Cassia siamea Lam. Encycl. 1:648. 1785; FBI 2:264; FPM 285; Mayur. 103; de Wit 263; FTN 1:131.

Leaflets 9-10 pairs, each 3-7 x 1.5-2.5 cm, oblong-elliptic. Flowers c. 3.5 cm across, in terminal panicles. Pods up to 17 x 1.8 cm.

Commonly cultivated in gardens and avenues, also naturalized. Fl. & Fr.: throughout the year. Tamil: Mancha Konnai.

Cassia surattensis Burm.f.Fl.Ind. 97. 1768; de Wit 269; FTN 1:131. *C. glauca* Lam. Encycl. 1:647. 1785; Brown 53; FBI 2:265; FPM 285; Mayur. 101.

Shrubs, up to 5 m tall. Leaflets 3-9 x 2-3.5 cm, ovate-elliptic to lanceate-elliptic. Flowers c. 4.5 cm across, yellow, in axillary, long-peduncled corymbs. Pods up to 14 x 1.8 cm.

Occasionally cultivated in gardens and avenues as an ornamental, also runs wild. Greenish, stalked glands present between the first two pairs of leaflets. Fl. January-April. Fr.: throughout the year.

Cassia tora L. Sp.Pl. 376. 1753; Brown 53; FBI 2:263 p.p; FPM 284; Mayur. 102; de Wit 276; Brenan in Kew Bull. 13:248. 1958; FTN 1:131.

Undershrubs, up to 1 m tall. Leaflets 3 pairs, each 2-4 x 1.5-2 cm, obovate-oblanate. Flowers c. 2.5 cm across, in axillary pairs. Pods up to 17 x 0.25 cm, curved.

A weed of roadsides and waste places; fairly common. Fl. & Fr.: throughout the year.

Leaves occasionally used as greens. Tamil: Thaharai.

Delonix Rafin.

Flowers white to pale yellow

.. .. . *D. elata*

Flowers bright red

.. .. . *D. regia*

Delonix elata (L.) Gamble in Gamble & Fischer, Fl. Pres. Madras 396. 1917 & 280. 1957 (repr.ed); Mayur. 99; FTN 1: 131. *Poinciana elata* L. in Torner, Cent. Pl. 2:16. 1756; FBI 2:260

Trees, up to 13 m tall. Leaflets 5-7 x 1-1.3 mm, linear. Flowers c. 5.5 cm across, in axillary and terminal corymbs; filaments up to 9.5 cm long. Pods up to 12 x 2.5 cm.

Occasionally cultivated in gardens and avenues. Fl.: October-April. Fr.: December-July. Tamil: Vaatha naaraayanan.

Delonix regia (Boj. ex Hook.) Rafin. Fl. Tellur. 2:92. 1837; FPM 280; Mayur. 99; FTN 1:132. *Poinciana regia* Boj ex Hook in Curtis, Bot. Mag. t. 2884. 1829.

Trees, up to 12 m tall. Rachis 25-55 cm long; pinnae 15-22 pairs; leaflets 7-12 x 3-4 mm, oblong. Flowers c. 6 cm across, in terminal and axillary corymbs. Pods up to 40 x 3.5 cm.

Commonly cultivated in gardens and avenues as an ornamental and also for shade. Seeds eaten by squirrels from submature pods by making a series of holes. Fl.: April-August. Fr.: throughout the year. Tamil: Neruppu Konari.

Parkinsonia L.

Parkinsonia aculeata L. Sp.Pl. 375. 1753; Brown 51; FBI 2:260; FPM 281; Mayur. 99; FTN 1:132.

Shrubs or small trees, up to 6 m tall. Phyllodes 18-42 x 0.18-0.22 cm, linear, borne on spines (primary rachis); leaflets numerous, 4-6 x 2-2.2 mm, obovate-oblong. Flowers c. 3 cm across, yellow, in corymbs. Pods up to 14 x 0.8 cm, constricted between seeds.

Occasionally cultivated in gardens and parks. Fl. & Fr.: March-September. Native of tropical America.

Peltophorum (Vogel) Benth. (nom. cons.)

Peltophorum pterocarpum (DC.) Baker ex Heyne, Nutt. Pl. Ned-Ind. 2:755. 1927; FTN 1:132. *Inga pterocarpa* DC. Prodr. 2:441. 1825. *Peltophorum ferrugineum* Benth. Fl. Austral. 2:270. 1864; Mayur.98.

Trees, up to 12 m tall; young parts rusty-tomentose. Pinnae 13 pairs; leaflets 10-20 pairs, each 10-18 x 4-7 mm, oblong. Flowers c. 3 cm across, yellow; calyx rusty-tomentose without. Pods up to 6 x 2.5 cm.

Commonly cultivated in parks and avenues, also runs wild. Fl.: February-August. Fr.: throughout the year.

Flowers showy. Tree gives good shade in summer. Tamil : Iyal vaagai. Native of the Malayan region.

Pterolobium R.Br. ex Wight & Arn. (nom.cons.)

Pterolobium hexapetalum (Roth) Santapau & Wagh in Bull. Bot.Surv.India 5:108. 1963; FTN 1:133. *Reichardia hexapetala* Roth, Nov. Pl. Sp. 210. 1821. *Pterolobium indicum* A. Rich Tent. Fl. Abyss. 1:247. 1847; FBI 2:259; FPM 280; Mayur. 98.

Straggling or climbing shrubs. Leaves bipinnate; stipules and stipels of pinnae spiny and hooked; leaflets 6-10 x 4-5 mm, oblong. Flowers c. 6 mm across, whitish, in terminal and axillary racemes or panicles; odd petal yellow. Pods up to 3.5 x 1 cm, prickly.

In scrub jungles; common. Fl. & Fr.: June-September.

The hooked prickles are very troublesome to people who pass through. Tamil: Karindhu.

Saraca L.

Saraca asoca (Roxb.) Wilde in Blumea 15:393. 1967; Zuijderhoudt in Blumea 15:422. 1967; FTN 1:133. *Jonesia asoca* Roxb. in Asiat. Res. 4: 365. 1799; Brown 51. *Saraca indica* auct. non L. 1769; FBI 2:271; FPM 289; Mayur. 104.

Trees, up to 8 m tall. Leaflets 5 pairs, each 6-12 x 2.5-5 cm, lanceate-elliptic or oblanceate. Flowers c. 2.3 cm across, red or orange-yellow, in dense, terminal, paniculate corymbs. Pods up to 10 x 2.5 cm, woody.

Occasionally cultivated in gardens and avenues. Fl. & Fr.: December-April.

Flowers very showy. Tamil: Asoka.

Tamarindus L.

Tamarindus indica L. Sp.Pl. 34. 1753; Brown 52; FBI 2:273; FPM 290; Mayur. 104; FTN 1:133.

Trees, up to 15 m tall. Leaves paripinnate; leaflets 15-20 x 4-5mm, oblong. Flowers c. 2.5 cm across; petals 3. Pods up to 12 x 2.2 cm.

Commonly cultivated along roadsides and near houses, also runs wild. Fl.: June-August. Fr.:August-May.

Mesocarp of fruit edible, used in culinary preparations. Tamil: Puliya maram. English: The Tamarind. Native of Tropical Africa.

MIMOSACEAE

1. Plants armed:

2. Anthers gland-crested at least when young:

3. Spikes with yellow and rosy-pink flowers *Dichrostachys*3. Spikes with yellow flowers only *Prosopis*

2. Anthers not gland-crested even when young:

4. Pods breaking into 1-seeded segments *Mimosa*

4. Pods not breaking into 1-seeded segments:

5. Leaves 4-foliolate *Pithecellobium*

5. Leaves not 4-foliolate:

6. Pods with pulpy mesocarp *Vachellia*6. Pods without pulpy mesocarp *Acacia* p.p.

1. Plants unarmed:

7. Herbs or undershrubs:

8. Prostrate herbs *Neptunia*8. Erect undershrubs *Desmanthus*

7. Trees or shrubs:

9. Leaves represented by phyllodes; leaflets absent *Acacia* p.p

9. Leaves not represented by phyllodes; leaflets present

10. Flowers pinkish *Samanea*

10. Flowers not pinkish:

11. Flowers in spike-like racemes *Adenanthera*

11. Flowers in heads:

12. Heads pendulous *Parkia*

12. Heads not pendulous:

13. Flowers on swollen receptacles *Leucaena*13. Flowers not on swollen receptacles *Albizia*

Acacis Mill.

1. Plants armed:

2. Straggling or climbing shrubs *A. caesia*

2. Erect shrubs or trees:

3. Flowers in heads:

4. Heads in axillary clusters:

5. Pods constricted between seeds *A. nilotica* subsp *indica*5. Pods not constricted between seeds *A. planifrons*4. Heads in terminal panicles *A. leucophloea*

3. Flowers in spikes:

6. Leaves with less than 10 pairs of leaflets *A. lenticularis*

6. Leaves with more than 10 pairs of leaflets:

7. Leaflets less than 20 pairs per leaf *A. ferruginea*7. Leaflets more than 20 pairs per leaf *A. polycantha*

1. Plants unarmed

.. .. . *A. auriculiformis*

Acacia auriculiformis A. Cunn. ex. Benth. in Hook. London J. Bot. 1:377. 1842; Chatterjee in BBSB 12:107. 1958; FTN 1:133.

Trees, up to 12 m tall; young stems flattened. Phyllodes 12-17 x 2-3 cm, falcate, 3-veined. Spikes axillary; flowers yellow. Pods curved.

Occasionally cultivated in gardens and avenues for shade. Fl.: November-March. Fr.: January-June. Native of Australia.

Acacia caesia (L.) Willd. Sp.Pl. 4:1090. 1806; FPM 304; Mayur. 108; Kosterm. in Dassan. & Fosb. Rev. Handb.Fl.Ceylon 1:48. 1980; FTN 1:133. *Mimosa caesia* L. Sp.Pl.522. 1753 p.p. *Acacia intsia* Willd. var *caesia* (L.) Baker in Hook.f.Fl.Brit. India 2:297. 1878.

Leaves bipinnate; pinnae 3-5 pairs; leaflets 8-12 x 3-6 mm, oblong. Flowers c. 5 mm long, white, in globose heads. Pods up to 12 x 3 cm.

In scrub jungles; rare. Fl.: July-October. Fr.: throughout the year.

Acacia ferruginea DC. Prodr. 2:458. 1825; FBI 2:295; FPM 303; Kosterm. 484; FTN 1:134.

Shrubs or trees, up to 10 m tall. Pinnae c. 3 pairs; leaflets c. 18 pairs per leaf, each 7-9 x 3-4 mm, obovate-oblongate. Flowers c. 9 mm long. Pods up to 8 x 2 cm.

In scrub jungles, Guindy; rare. Fl. & Fr.: July-October.

Acacia lenticularis Wallex Benth. in Hook. London J. Bot. 1:508. 1842; FBI 2:296; FPM 303.

Shrubs or trees, up to 7 m tall. Pinnae c. 2 pairs; leaflets c. 4 pairs per leaf, each 13-17 x 7-10 mm, obovate-oblong. Flowers c. 7 mm long; calyx c. 1 mm long; corolla c. 3 mm long. Pods up to 6 x 2.2 cm.

In scrub jungles, Vandalur; rare. Fl. & Fr.: July-October.

Acacia leucophloea (Roxb.) Willd. Sp.Pl. 4:1083. 1806; Brown 55; FBI 2:294; FPM 302; Mayur. 109; Kosterm. 486; FTN 1:135. *Mimosa leucophloea* Roxb. Pl. Cor. t. 150. 1800.

Shrubs or trees, up to 8 m tall. Pinnae 5-12 pairs; leaflets 1.5-4 x 0.5-1 mm, oblong. Heads in terminal and axillary panicles; flowers white. Pods up to 12 x 0.8 cm, falcate or variously curved.

In scrub jungles; rare. Fl.: September-November. Fr.: October-January.

Bark used in the preparation of country arrack. Tamil: Velvaalam.

Acacia nilotica (L.) Willd. ex. Del. subsp. **indica** (Benth.) Brenan in Kew Bull. 12:84. 1957; FTN 1:135. *A. arabica* (Lam.) Willd. var *indica* Benth. in Hook. London J. Bot. 1:500. 1842. *Acacia arabica* auct. non (Lam.) Willd. 1806; Brown 55; FBI 2:293; FPM 301; Mayur. 109.

Trees, up to 10 m tall; bark black. Pinnae 3-6 pairs; leaflets 10-13 pairs, each 3-6 x 1-2 mm, linear-oblong. Flowers c. 4 mm long, yellow. Pods up to 15 x 2 cm.

Along the sides of lakes, rice fields etc.; fairly common, Fl.: May-October. Fr.: throughout the year. Tamil: Karu vaelam.

Acacia planifrons Wight & Arn. Prodr. 276. 1834; FBI 2:293 p.p.; FPM 302; Kosterm. 491; FTN 1:135.

Trees, up to 10 m tall; bark grey. Pinnae 3-4 pairs; leaflets 5-10 pairs per leaf, each 1-2 x 0.5-1 mm, oblong. Flowers c. 4 mm long, white. Pods up to 9 x 0.6 cm, spirally curved.

Commonly cultivated in forests, also naturalized. Fl. & Fr.: February-May.

Wood used as fire-wood. Tamil: Kodaivaelam.

Acacia polycantha Willd. Sp.Pl. 4:1079. 1806; FTN 1:135. *A. suma* (Roxb.) Buch.-Ham. ex voigt, Hort. Sub. Calc. 260. 1845; FBI 2:294; FPM 303. *Mimosa suma* Roxb. Fl. Ind. 2:563. 1824.

Shrubs or trees, up to 7 m tall. Pinnae 3-4 pairs; leaflets 50-80 pairs per leaf, each 3-5 x 1-1.5 mm, oblong. Flowers c. 6 mm long, white. Pods up to 10 x 2 cm.

In scrub jungles; very rare. Fl. & Fr.: July-November.

Adenanthera L.

Adenanthera pavonina L. Sp.Pl.384. 1753; Brown 54; FBI 2:287; FPM 296; Mayur. 107; Kosterm. in Dassan. & Fosb. Rev.Handb. Fl.Ceylon 1:470. 1980; FTN 1:136.

Trees, up to 10 m tall. Pinnae 4-6 pairs; leaflets 4-8 pairs, each 2.5-4 x 2-3 cm, oblong-elliptic. Flowers c. 5 cm long, pale white. Pods up to 20 x 1.5 cm, twisted; seeds orange-red.

Occasionally cultivated in parks and avenues for shade. Fl.: February-April. Fr.: March-August.

Seeds used as jeweller's weight. Tamil: Aanaik kundumani.

Albizia Durazz.

- | | | |
|-------------------------------|---------|------------------------|
| 1. Leaflets under 1 cm long | .. .. . | <i>A. amara</i> |
| 1. Leaflets over 1.5 cm long: | | |
| 2. Stamens over 3 cm long | .. .. . | <i>A. lebbeck</i> |
| 2. Stamens under 2.5 cm long | .. .. . | <i>A. odoratissima</i> |

Albizia amara (Roxb.) Boivin, Encycl. 19(2):34. 1838; FBI 2:301; FPM 306; Mayur. 110; Brenan in Kew Bull. 10:189. 1955; Kosterm. in Dassan. & Fosb. Rev.Handb. Fl.Ceylon 1:498. 1980; FTN 1:136. *Mimosa amara* Roxb. Pl. Cor.t. 122. 1799.

Shrubs or trees, up to 8 m tall. Leaves bipinnate; leaflets 4-6 x 1-2 mm, oblong. Heads c. 1.8 cm across, axillary. Flowers c. 6 mm long. Pods up to 12 x 2.5 cm.

In scrub jungles; rare. Fl.: March-May. Fr.: April-October.

Albizia lebbeck (L.) Willd. Sp.Pl. 4:1066. 1806; FBI 2:298; FPM 306; Mayur. 110; Kosterm. 502; FTN 1:137. *Mimosa lebbeck* L.Sp.Pl.516.1753.

Trees, up to 15 m tall. Leaves bipinnate; leaflets 3-4.5 x 1.3-2.5 cm, oblong. Heads c. 4 cm across; flowers c. 4 cm long. Pods up to 17 x 3.5 cm.

In jungles; common. Fl.: December-May. Fr.: throughout the year. Tamil: Vaagai.

Albizia odoratissima (L.f.) Benth. in Hook. London J.Bot. 3:88. 1844; FBI 2:299; FPM 306; Kosterm. 499; FTN 1:137. *Mimosa odoratissima* L.f. Suppl. Pl.437. 1781.

Trees, up to 10 m tall. Leaves bipinnate; leaflets 2-3.2 x 0.6-1.2 cm, oblong. Heads c. 2.5 cm across, in axillary clusters or in terminal panicles. Flowers c. 1.6 cm long. Pods up to 15 x 2.5 cm.

In jungles, Tambaram; very rare. Fl.: July-August. Fr.: throughout the year.

Desmanthus Willd.

Desmanthus virgatus Willd. Sp.Pl. 4:1047. 1806; FBI 2:290; FPM 297; Mayur. 107; Kosterm. in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 1:473. 1980; FTN 1:137.

Undershrubs, up to 1.5 m tall. Leaves bipinnate; pinnae c. 4 pairs; leaflets 4-8 x 1-2 mm, oblong. Heads c. 1 cm across, solitary, on axillary peduncles. Flowers c. 7 mm long, white. Pods up to 6 x 0.3 cm, linear.

Occasionally cultivated in fields, also runs wild. Fl. & Fr.: throughout the year.

Plant used as a fodder, also as green manure.

Dichrostachys (DC.) Wight & Arn. (nom. cons.)

Dichrostachys cinerea (L.) Wight & Arn. Prodr. 271. 1834; FBI 2:288; FPM 297; Mayur. 108; Brenan & Brummitt in Bol.Soc. Brot. ser. 2:39:110. 1965; Kosterm. in Dassan. & Fosb.Rev.Handb. Fl.Ceylon 1:466. 1980; FTN 1:138. *Mimosa cinerea* L.Sp.Pl.520. 1753.

Shrubs, up to 5 m tall. Leaves bipinnate; pinnae 4-7 pairs; leaflets 1-2 x 0.5-0.7 mm, linear. Spikes with long sterile flowers below and short bisexual flowers above, 6-10 mm long. Pods 5-8 mm wide, coiled.

In scrub jungles; common. Fl.: April-August. Fr.: June-December. Tamil: Vadathazhai.

Leucaena Benth.

Leucaena latisiliqua (L.) Gills in Taxon 23:190. 1974; FTN 1:138. *Mimosa latisiliqua* L.Sp.Pl. 519. 1753. *Leucaena glauca* auct. non Benth. 1842; FBI 2:290; FPM 297; Mayur. 107.

Shrubs or trees, up to 6 m tall. Rachis 15-18 cm long; pinnae 6-7; leaflets 7-18 x 2-4 mm, lanceate-oblong. Flowers c. 4 mm long, white. Pods up to 16 x 1.8 cm.

Commonly cultivated in gardens and in fields, also runs wild. Fl. & Fr.: August-December.

Plants used as green manure. Leaves used as fodder for cattle. Seeds used as beads for making chains.

Mimosa L.

Straggling shrubs; Stamens 8	.. .. .	<i>M. intsia</i>
Diffuse undershrubs; Stamens 4	.. .. .	<i>M. pudica</i>

Mimosa intsia L. Sp.Pl.522. 1753; Ali in Taxon 16:237. 1967; FTN 1:138. *M. rubicaulis* Lam.Encycl. 1:20. 1783; FBI 2:291; FPM 299; Barnes 15. *M. hamata* auct. non Willd. Sp.Pl. 4:1033. 1806; Mayur. 106.

Stems with recurved prickles. Leaves bipinnate; pinnae 4-7 pairs; leaflets 6-12 pairs per pinna, each 6-12 x 3-6 mm, oblong. Heads c. 2.2 cm across, pinkish, in axillary clusters; flowers c. 8 mm long. Pods up to 8 x 2 cm, falcate, sparsely prickly.

In scrub jungles; fairly common. Fl.: December-April. Fr.: throughout the year.

Mimosa pudica L.Sp.Pl. 518. 1753; Brown 54; FBI 2:291; FPM 298; Mayur. 106; Brennan in Kew Bull. 10:184. 1955; FTN 1:138.

Branches prickly. Leaves bipinnate; pinnae 1-4 pairs; leaflets 10-20 pairs, linear-oblong. Flowers c. 1 cm long, pink. Pods up to 2 x 0.4 cm.

A weed of waysides and waste places; common. Fl. & Fr.: October-April.

Leaves highly sensitive to touch. Tamil: Thottaal vaadi. English: Sensitive plant. Native of South America.

Neptunia Lour.

Herbs aquatic; internodes spongy	.. .. .	<i>N. oleracea</i>
Herbs terrestrial; internodes not spongy	.. .. .	<i>N. triuetra</i>

Neptunia oleracea Lour. Fl. Cochinch. 654. 1790; FBI 2:285; FPM 295; Mayur. 105; Kosterm. in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 1:460. 1980; FTN 1:138. *Desmanthus natans* Willd. Sp.Pl. 4:1044. 1806; Brown 54.

Branches rooting at nodes. Leaves bipinnate; pinnae 2-6; leaflets 8-20 pairs, oblong. Flowers c. 1 cm long, yellow, in axillary capitate spikes. Pods up to 25 x 6 mm.

A floating aquatic weed of ponds and ditches, sometimes on drained mud; fairly common. Fl. & Fr.: October-March.

Leaves sensitive to touch.

Neptunia triuetra (Willd). Benth. in Hook. London J.Bot. 4:355. 1844; FBI 2:286; FPM 295; Mayur. 105; FTN 1:139. *Desmanthus triquetrus* Willd. Sp.Pl. 4:1049. 1806.

Branches rooting at nodes. Leaves bipinnate, glandular between the lowest pairs of pinnae; pinnae 1-3 pairs; leaflets 10-15 pairs per pinna, each 4-6 x 2-3 mm, linear-oblong. Heads c. 8 mm across, in axillary peduncles. Flowers c. 4 mm long. Pods up to 2.5 x 0.5 cm.

A weed of moist places; rare. Fl. & Fr.: November-February.

Parkia R.Br.

Parkia biglandulosa Wight & Arn. Prodr. 279. 1834; Brown 56; FBI 2:289; Mayur. 106; FTN 1:139.

Trees, up to 15 m tall. Leaves bipinnate; rachis up to 26 cm long; pinnae 20-25 pairs; leaflets 5-7 x 0.5-0.8 mm, linear. Heads c. 5 cm across, top-shaped; bracts spatulate. Flowers 8-12 mm long, densely packed. Pods up to 15 x 2 cm.

Occasionally cultivated in gardens and avenues for shade. Fl.: November-February. Fr.: January-May.

Rachis with adaxial glands at base as well as between the distal pairs of pinnae. Flower heads resemble badminton ball. Tamil: Panthu kaai maram. Native of Africa.

Pithecellobium Mart. (nom.cons.)

Pithecellobium dulce (Roxb.) Benth. in Hook. London J. Bot. 3:199. 1844; FBI 2:302; FPM 308; Mayur. 110; Kosterm. Monogr. *Pithecolobium* 8. 1954 & in Dassan. & Fosb.Rev.Handb. Fl.Ceylon 1:495. 1980; FTN 1:139. *Mimosa dulcis* Roxb. Pl.Cor.t.99. 1798. *Inga dulcis* (Roxb.) Willd. Sp.Pl. 4:1005. 1806; Brown 54.

Trees, up to 12 m tall, with stipular spines. Leaflets 2-4 x 0.8-1.7 cm, oblong-elliptic. Flowers c. 4 mm long, white, in globose heads. Pods up to 12 x 1.2 cm, variously curved; seeds enveloped by spongy, whitish or pinkish aril.

In jungles and thickets, also along roadsides; fairly common. Fl.: December-April. Fr.: February-August.

Aril edible. Tamil: Kodukkaappuli. Native of Mexico.

Prosopis L.

Twigs prickly; pods cylindrical

.. .. . *P. cineraria*

Twigs thorny; pods flattened

.. .. . *P. juliflora*

Prosopis cineraria (L.) Druce in Bot. exch. Club Soc. Brit. Isles 3:422. 1914; FTN 1:139. *Mimosa cineraria* L. Sp.Pl. 517. 1753, "*cinerea*". *Prosopis spicigera* L. Mant.Pl.68. 1767; FBI 2:288; FPM 297; Mayur. 107.

Shrubs or trees, up to 6 m tall. Leaves bipinnate; pinnae c. 2 pairs; leaflets 8-12 pairs per pinna, 6-10 x 3-5 mm, oblong, 2-veined at base. Flowers c. 6 mm long, in dense axillary spikes; ovary glabrous. Pods up to 15 x 0.5 cm.

In scrub jungles, often near temples; very rare. Leaves, inflorescences and fruits often show insect-galls. Fl.: January-April. Fr.: February-August.

Prosopis juliflora (Sw.) DC. Prodr. 2:447. 1825; Johnston in Brittonia 14:83. 1962; Towns. in Kew Bull. 21:436. 1968; Burkart in J. Arnold Arbor. 57:499. 1976. *Mimosa juliflora* Sw. Prodr. 85. 1788. *Prosopis chilensis* auct. non (Molina) Stuntz 3. 1914; FTN 1:139.

Shrubs or trees, up to 10 m tall. Leaves bipinnate; pinnae 2-4 pairs; leaflets 8-25 pairs, oblong-linear. Flowers c. 7 mm long, pale yellow, in dense axillary spikes. Pods up to 20 x 1 cm.

Along roadsides, railway tracks and other waste places, often on hedges, also in jungles; very common. Fl.: January-April. Fr.: February-July.

Highly successful and fast-growing alien species, capable of growing on loamy, clayey or even sandy soils, along inland as well as seashores, also close to backwaters.

Branches used as fire-wood. Pods relished by goats. Tamil: Vaeli Kaatthaan.

Samanea Merr.

Samanea saman (Jacq.) Merr. in J.Wash.Acad.Sci. 6:47. 1916; Kosterm. in Dassan. & Fosb.Rev.Handb. Fl.Ceylon 1:477. 1980; FTN 1:140. *Mimosa saman* Jacq. Fragg. 15.t.9. 1800. *Enterolobium saman* (Jacq.) Prain ex King in J. Asiat.Soc.Bengal 66.252. 1898; FPM 308; Mayur. 109.

Trees, up to 16 m tall. Leaves bipinnate; pinnae 3-5 pairs; leaflets 2-5 x 1.2-2.5 cm, elliptic to obovate or oblong. Heads 4-6 cm across, on axillary peduncles; flowers c. 4 cm long. Pods up to 19 x 2 cm, linear, pulpy within.

Commonly cultivated along parks and roadsides, also runs wild. Fl.: February-July. Fr.: throughout the year.

The tree gives good shade in summer, fast-growing. The pulp of pods sugary. Tamil: Thoongu moonchi maram. English: The Rain Tree. Native of Central & South America.

Vachellia Wight & Arn.

Vachellia farnesiana Wight & Arn. Prodr. 1:272. 1834; Britton & Killip. in Ann. N.York Acad.Sci. 35:138. 1936; Kosterm. in Dassan. & Fosb. Rev.Handb.Fl.Ceylon 1:478. 1980. *Mimosa farnesiana* L. Sp.Pl. 521. 1753. *Acacia farnesiana* (L.) Willd. Sp.Pl. 4(2):1083. 1806; FBI 2:292; FPM 301; Mayur. 109; FTN 1:134.

Shrubs, up to 4 m tall. Leaves bipinnate; pinnae 3-8 pairs; leaflets 3-4 x 1-1.5 mm, oblong-linear. Flowers c. 3 mm long, yellow, in globose axillary heads. Pods up to 7 x 1.5 cm, often curved.

In thickets and hedges; rare. Fl. & Fr.: February-July. Native of South America.

VAHLIACEAE**Bistella** Adans.

Bistella dichotoma (Murr.) Bullock in Acta Bot. Neerl. 15:85. 1966; FTN 1:144. *Heuchera dichotoma* Murr. in Novi Commen. Soc. Regiae Sci. Gott. 3:64.t.1. 1773. *Vahlia dichotoma* (Murr.) Kuntze, Rev. Gen. Pl. 227. 1891; Bridson in Kew Bull. 30:164. 1975. *V. oldenlandioides* Roxb. Fl. Ind. 2:89. 1824; Wood 262; FBI 2:399; FPM 317; Mayur. 111.

Herbs, up to 20 cm tall. Leaves 15-30 x 2-3 mm, linear. Flowers c. 3 mm across, white, usually in axillary pairs. Capsules c. 3 mm across, subglobose.

A weed of sandy seashores and also near lakes; fairly common. Fl. & Fr.: November-April.

Bistella digyna (Retz.) Bullock. in Acta Bot. Neerl. 15:85. 1966; FTN 1:145. *Oldenlandia digyna* Retz. Obs. Bot. 4:23. 1786. *Vahlia digyna* (Retz.) Kuntze, Rev. Gen. Pl. 227. 1891; Bridson 177. *V. viscosa* Roxb. Fl. Ind. 2:89. 1824; FBI 2:399; FPM 317; Mayur. 111.

Mayuranathan records this from Thiruvanniyur.

CRASSULACEAE**Kalanchoe** Adans.

Kalanchoe pinnata (Lam.) Pers. Syn. 1:446. 1805; Backer in Steenis, Fl. Males. ser. 1.4:199. 1951; FTN 1:146. *Cotyledon pinnata* Lam. Encycl. 2:141. 1786. *Bryophyllum pinnatum* (Lam.) Oken, Allg. Naturgesch. 3:1966. 1841; FPM 319; Mayur. 112. *B. calycinum* Salisb. Parad. Lond. t.3. 1805; Brown 76; FBI 2:413.

Succulent herbs, up to 1 m tall. Leaves 1-3-foliate; leaflets 8-13 x 5-8 cm, elliptic or ovate-elliptic, margin crenate. Flowers c. 3 cm long, in terminal panicles.

Occasionally cultivated in gardens, also runs wild. Fl.: November-March.

Leaflets warmed in oil and applied over boils for quick relief. Tamil: Kattip pottaal kutti podum. Native of tropical Africa.

DROSERACEAE**Drosera** L.

Leaves radical, spatulate

.. .. *D. burmannii*

Leaves cauline, linear

.. .. *D. indica*

Drosera burmannii Vahl, Symb. Bot. 3:50. 1794; Wood 348; FBI 2:224; FPM 320; Mayur. 112; Steenis in Steenis, Fl. Males. ser. 1.4:378. 1953; FTN 1:146.

Herbs, up to 8 cm tall. Leaves 10-20 x 5-10 mm, glandular-hairy, base attenuate. Flowers c. 5 mm across, pinkish-white, in helicoid cymes on scapose peduncles. Capsules c. 3 mm across.

An insectivorous weed of open, moist or marshy places; common. Fl. & Fr.: November-March.

Drosera indica L. Sp.Pl.282. 1753; FBI 2:424; FPM 320; Mayur. 112; Steenis 379; FTN 1:146.

Herbs, up to 7 cm tall. Leaves 15-35 x 2-3 mm, glandular-hairy, viscid. Flowers c. 5 mm across, rosy-pink, in helicoid cymes. Capsules c. 3 mm across.

An insectivorous weed of marshy or moist places; very rare. Fl. & Fr.: November-March.

HALORAGACEAE

Myriophyllum L.

Myriophyllum indicum Willd. Sp.Pl. 4:407. 1805; FBI 2:433; Schindl. in Engler, Pflanzenr. 23:93. f.28 D. 1905; FPM 321; Barnes 16; Subram. Aquat. Angiosp. 17. 1962; Meijden in Blumea 17:309. 1969.

Submerged herbs; stems rooted at base; branches floating above. Leaves whorled, the lower up to 8 cm long, pinnately dissected, the upper much smaller, lanceate, serrate. Flowers c. 2 mm across, sessile, 4-merous, in axillary fascicles. Fruits of 4 mericarps.

A weed of fresh-water ponds and ditches; very rare. Fl. & Fr.: January-March.

COMBRETACEAE

1. Straggling or climbing shrubs:

2. Flowers under 1 cm long

.. .. . *Combretum*

2. Flowers over 5 cm long

.. .. . *quisqualis*

1. Trees:

3. Flowers in heads

.. .. . *Anoqeissus*

3. Flowers not in heads

.. .. . *Terminalia*

Anoqeissus (DC.) Guill.

Anoqeissus acuminata (Roxb. ex DC.) Guill. & Perr. Fl. Seneg. Tent. 7:280. 1832; FBI 2:450; FPM 330; FTN 1:148. *Conocarpus acuminata* Roxb. ex DC. Prodr. 3:16. 1828.

Trees, up to 16 m tall. Leaves 3-5 x 1.5-3 cm, elliptic, apex acute. Flowers c. 7 mm long, greenish, in dense globose heads. Fruits c. 1 cm long, winged.

Cultivated in gardens and avenues; rare. Fl. & Fr.: February-April.

Anoqeissus latifolia (Roxb. ex DC.) Wall. ex Guill. & Perr. Fl. Seneg. Tent. 7:280. 1832; FBI 2:450; FPM 330; Barnes 16; FTN 1:148. *Conocarpus latifolia* Roxb. ex DC. Prodr. 3:16. 1828.

Barnes records this from Vengambakkam Hills.

Combretum Loefling (*nom.cons.*)

Combretum albidum G. Don in Trans. Linn. Soc. London 15:429. 1827; FTN 1:149. *C. ovalifolium* Roxb. Fl. Ind. 2:226. 1824; FBI 2:458; FPM 332; Mayur. 114.

Leaves 4-13 x 1-5 cm, ovate to lanceate or suborbicular. Flower c. 5 mm long, pale white, in pauculate spikes. Fruits c. 2 cm across, pinkish, 4-winged.

In scrub jungles; common. Branches rooting at nodes when lying on ground. Fl.: February-April. Fr.: March-July.

Quisqualis L.

Quisqualis indica L. Sp.Pl. ed. 2.556. 1762; Brown 63; FBI 2:459; FPM 332; Mayur. 115; Exell in Steenis, Fl. Males. ser. 1.4:547. 1954; FTN 1:149.

Leaves 8-16 x 4-8 cm, elliptic, base subcordate. Flowers c. 4 cm across, white turning red, in terminal spikes; hypanthium up to 8 cm long, tubular.

Commonly cultivated in gardens as an ornamental. Fl.: throughout the year.

Flowers showy, open in the evening. Petals white at first, turning reddish the next morning. Tamil: Rangoon malli. English: Rangoon Creeper. Native of Malay archipelago.

Terminalia L. (*nom.cons.*)

- | | | |
|------------------------------|--------|--------------------|
| 1. Fruits sharply 5-angled | ... .. | <i>T.arjuna</i> |
| 1. Fruits not 5 - angled: | | |
| 2. Leaves orbicular-elliptic | .. .. | <i>T.bellirica</i> |
| 2. Leaves obovate | .. .. | <i>T.catappa</i> |

Terminalia arjuna (Roxb.ex DC.) Wight & Arn. Prodr. 314. 1834; FBI 2:447; FPM 329; Mayur. 113; FTN 1:149. *Pentaptera arjuna* Roxb. ex DC. Prodr. 3:14. 1828. *Terminalia berryi* Wight & Arn. Prodr. 314. 1834; Brown 63.

Leaves 6-14 x 2.5-4 cm, oblong-elliptic. Flowers c. 5 mm across, cream-coloured, in terminal and axillary spicate panicles. Fruits c. 4 x 2.5 cm.

Occasionally cultivated along roadsides and parks, also runs wild. Bark smooth, ash-coloured, exfoliating. Leaves and inflorescences often with insect galls. Fl.: April-June. Fr.: June-December. Tamil: Pilla Maruthu.

Terminalia bellirica (Gaertn.) Roxb. Pl. Cor. t. 198. 1805, "*bellerica*"; Brown 63; FBI 2:445; FPM 328; Mayur. 114; Exell in Steenis, Fl. Males. ser. 1.4:569. 1954; FTN 1:149. *Myrobalanus bellirica* Gaertn. Fruct. 2:90. t.97. ff. A-D. 1791. "*bellirina*".

Trees, up to 10 m tall. Leaves 6-12 x 4-8 cm, base obtuse to cuneate. Flowers c. 6 mm across, in dense axillary spikes. Fruits c. 2 cm across, subglobose.

Occasionally cultivated in gardens and parks. Fl.: April-May. Fr.: May-August. Tamil: Thaani.

Terminalia catappa L. Syst. Nat. ed. 12.2:674. 1767; Brown 63; FBI 2:444; FPM 328; Mayur. 114; Exell 566; FTN 1:150.

Trees, up to 12 m tall. Leaves 12-20 x 9-14 cm, base narrowly cordate. Flowers c. 5 mm across, cream-coloured, in axillary spikes. Fruits c. 5 x 3.2 cm, compressed- ellipsoid, rangled.

Commonly cultivated around houses and parks. Fl. & Fr.: throughout the year.

Kernel edible. Tamil: Naattu vaadhaam. English: The Country Almond.

Calycopteris Lam.

Calycopteris floribunda Lam. Tabl. Encycl. 2:485. t. 357. 797; FBI 2:449; FPM 331; Mayur. 114; Exell in Steenis, Fl. Males ser. 1.4:584. 1954; FTN 1:149.

Mayuranathan record. this.

MYRTACEAE

1. Fruit a berry:

2. Flowers in panicles

.. .. . *Syzygium*

2. Flowers not in panicles:

3. Fruits 1-2-seeded

.. .. . *Eugenia*

3. Fruits many-seeded

.. .. . *Psidium*

1. Fruit a capsule

.. .. . *Eucalyptus*

Eucalyptus L 'Herit

Young leaves with reddish hairs

.. .. . *E. torelliana*

Young leaves glabrous

.. .. . *E. tereticornis*

Eucalyptus tereticornis Sm. Spec. Boty New Holl. 41.1795; Matthew in Rec. Bot. Surv. India 20:112. 1969; FTN 1:151.

Trees, up to 18 m tall. Leaves 9-15 x 1-6 cm, falcate, lanceate or ovate. Flowers up to 1.3 cm long, 5-8 together, in axillary umbels. Capsules c. 2 cm across.

Commonly cultivated in forests, gardens and parks. Fl.: November-March. Fr.: January-April.

Wood used in paper industries. Leaves yield essential oil used in medicine. Tamil: Thyla maram. Native of Australila.

Eucalyptus torelliana F.v. Muell. Fragm. Phyt. Austr. 10:106. 1876; Maiden in Crit. Revis. *Eucalyptus* 4:239. 1920; Blakely, Key Eucal. ed. 2.94. 1955; Hall *et al.* Forest Trees Australia ed. 3.40. 1970; FTN 1:153.

Trees, up to 10 m tall. Leaves 8-14 x 4-8 cm, ovate or ovate-lanceate, often peltate. Flowers c. 1 cm across, white to pink, in terminal and axillary panicles.

Occasionally cultivated in gardens and parks. Fl.: January-April. Fr.: March-May. Native of Australia.

Eugenia L.

Eugenia bracteata (Willd.) Roxb. ex DC. Prodr. 3:264. 1828; FBI 2:502; FPM 342; Mayur. 116; Ashton in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 2:416. 1981; FTN 1: 153. *Myrtus bracteata* Willd. Sp.P1. 2:969. 1799.

Shrubs, up to 3 m tall. Leaves 3-6 x 1-3 cm, elliptic. Flowers c. 1.2 cm across, solitary, or in axillary cymes. Fruits c. 1.2 cm across, orange-yellow.

Along sandy seashores and in jungles; rare. Fl.: July October. Fr.: September-February.

Fruits eaten by children.

Psidium L.

Psidium guajava L. Sp.P1. 470. 1753; FBI 2:468 "*guyava*"; FPM 334; Mayur. 115; Ashton in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 2:406. 1981; FTN 1:154.

Shrubs or trees, up to 6 m tall; stems 4-angled when young. Leaves 8-12 x 4-6 cm, oblong-elliptic, coriaceous. Flowers c. 3.5 cm across, white, axillary. Berries 3-6 cm across, globose.

Commonly cultivated around houses and orchards. Fl.: April-July. Fr.: June-October.

Fruits edible. Tamil: Koyya. English: Guava. Native of tropical America.

Syzygium Gaertn. (nom.cons.)

Syzygium cumini (L.) Skeels in U.S.D.A. Burm. Pl. Industr. Bull. 248:2. 1912; Ashton in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 2:443. 1981; FTN 1:156. *Myrtus cumini* L. Sp.P1. 471. 1753. *Syzygium jambolanum* (Lam.) DC. Prodr. 3: 259. 1828; Brown 66; FPM 340; Mayur. 116. *Eugenia jambolana* Lam. Encycl. 3:198. 1789; FBI 2:499.

Trees, up to 12 m tall. Leaves 7-16 x 3-6 cm, elliptic. Flowers c. 8 mm across, pale white. Fruits 1.5-2 cm across, purplish-black when ripe.

In jungles and roadsides; fairly common. Leaves often show insect galls. Fl.: April-July. Fr.: May-September.

Fruits edible, relished by birds. Tamil: Naaval.

LECYTHIDACEAE**Couroupita Aubl.**

Couroupita guianensis Aubl. Pl. Gui. 2:708.t.282. 1775; Mayur. 116; Chitt. Dict. Gard. ed. 2. 563. 1956; FTN 1:158.

Trees, up to 12 m tall. Leaves 10-20 x 4-8 cm, oblong oblanceate. Flowers c. 7 cm across, red, in long pendulous panicles. Fruits up to 15 cm across, globose, with woody pericarp.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year. Tamil: Naagalingam. English: The Cannon Ball Tree. Native of tropical America.

BARRINGTONIACEAE**Barringtonia Forst. & Forst.f. (nom.cons.)**

Barringtonia acutangula (L.) Gaertn. Fruct. 2:97.t.101. 1790; FBI 2:508; FPM 344; Mayur. 117; Payens in Blumea 15: 226. 1967; FTN 1:158. *Eugenia acutangula* L. Sp.P1. 471. 1753.

Trees, up to 8 m tall. Leaves 9-14 x 3.5-5 cm, narrowly elliptic. Flowers c. 6 mm across, pink, in pendulous spikes up to 30 cm long. Fruits up to 3.5 x 2.2 cm.

Along the sides of canals and near rice fields; fairly common. Fl.: July-September. Fr.: August-November. Tamil: Samutthirappaalai.

Careya Roxb. (nom.cons.)

Careya arborea Roxb. Pl. Cor. t.218. 1811; Brown 67; FBI 511; FPM 345; Mayur. 117; FTN 1:159.

Mayuranathan records this.

MELASTOMATACEAE

Shrubs; leaves palminerved	.. .. .	<i>Osbeckia</i>
Shrubs; leaves penninerved	.. .. .	<i>Memecylon</i>

Memecylon L.

Flowers in simple umbels	.. .. .	<i>M. umbellatum</i>
Flowers not in simple umbels	.. .. .	<i>M. edule</i>

Memecylon edule Roxb. Pl. Cor. t. 82. 1798; FBI 2:563; FPM 356; Maxwell in Gard. Bull. (Singapore) 33: 1980; FTN 1:160.

Shrubs, up to 3 m tall. Leaves 4-7 x 1.5-4 cm, ovate to elliptic or lanceate. Flowers c. 8 mm across, purplish-pink, in axillary cymose panicles. Fruits c. 1 cm across, globose.

In scrub jungles; very common. Leaves often with black patches (fungal infection) Fl.: February-June. Fr.: April-September.

Flowers very showy; may be cultivated in gardens. Fruits edible. Tamil: Kaasaan.

Memecylon umbellatum Burm. f. Fl. Ind. 87. 1768; FPM 355; Mayur. 118; Bremer in Opera Bot. 50:9.t.3. 1979; Mayur. 118; FTN 1:161.

Shrubs, up to 5 m tall. Leaves 5-9 x 2.5-4.5 cm, elliptic. Flowers c. 1 cm across, blue, in short-peduncled umbels. Fruits c. 1 cm across, yellow turning black-purple when ripe.

In scrub jungles; common. Leaves often with black patches (fungal infection). Fl.: July-August. Fr.: August-January, Tamil: Kaasaan.

Osbeckia L.

Osbeckia zeylanica L.f. Suppl. P1. 215. 1781; FBI 2:156; FPM 349; Mayur. 118; Hansen in Ginkgoana 4:43.f.9(4). t.7 (A & B). 1977; FTN 1:163.

Herbs, up to 16 cm tall stems 4-angled. Leaves 1.5-3 x 1-1.7 cm, elliptic. Flowers c. 2 cm across, pinkish-purple, in terminal sessile heads; calyx with stellate bristles. Capsules c.4 mm across.

A weed of moist places; rare. Fl.& Fr.: December-March.

Flowers showy; may be cultivated in gardens as an ornamental.

LYTHRACEAE

1. Herbs:

- | | | |
|--|---------|----------------------|
| 2. Placentas continuous with styles | .. .. . | <i>Nesaea</i> |
| 2. Placentas not continuous with styles: | | |
| 3. Capsules horizontally striate | .. .. . | <i>Rotala</i> |
| 3. Capsules not horizontally striate | .. .. . | <i>Ammannia</i> |
| 1. Trees or shrubs: | | |
| 4. Flowers 4-merous | .. .. . | <i>Lawsonia</i> |
| 4. Flowers 6-merous | .. .. . | <i>Lagerstroemia</i> |

Ammannia L.

- | | | |
|-----------|---------|---------------------|
| Stamens 4 | .. .. . | <i>A. baccifera</i> |
| Stamens 8 | .. .. . | <i>A. octandra</i> |

Ammannia baccifera L. Sp.P1. 120. 1753; FBI 2:569; FPM 360; Mayur. 121; FTN 1:165.
A. salicifolia auct. non Blume 1856; FBI 2:569.

Stems 4 angled, up to 22 cm tall. Leaves 1.5-3.5 x 0.2-0.5 cm, linear to linear-elliptic. Flowers c. 2 mm across, pinkish, in axillary, verticillate cymes. Capsules c. 2 mm across.

A weed of rice fields and other marshy or moist places; common. Fl. & Fr.: September-April.

Ammannia octandra L.f. Suppl. P1. 127. 1781; FBI 2:571; FPM 360; Mayur. 120; FTN 1:165.

Stems 4 angled, up to 25 cm tall. Leaves 2-5 x 0.2-0.4 cm, linear-oblong. Flowers c. 3 mm across, rosy-pink, in axillary cymes. Capsules c. 3 mm across.

A weed of marshy and moist places; very rare. Fl. Fr.: November-March.

Lagerstroemia L.

- | | | |
|----------------------------------|---------|-------------------|
| Shrubs; leaves under 3.5 cm wide | .. .. . | <i>L. indica</i> |
| Trees; leaves over 3.5 cm wide | .. .. . | <i>L. reginae</i> |

Lagerstroemia indica L. Syst. Nat. ed. 10. 1076. 1759; Brown 62; FBI 2:576; FPM 362; Mayur. 121; Furt. & Srisuko in Gard. Bull. Straits Settle. 24:190. 1969; FTN 1:165.

Stems sharply 4-angled when young. Leaves 3-6.5 x 1.5-3.5 cm, elliptic. Flowers c. 3.5 cm across, rosy-purple, in terminal corymbs.

Commonly cultivated in gardens as an ornamental. Fl.: November-March. Native of China.

Lagerstroemia reginae Roxb. Pl. Cor. t.65. 1795; Brown 62; Furt. & Srisuko 261; FTN 1:165. *L. flos-reginae* Retz. Obs. Bot. 5:25. 1788 p.p.; FBI 2:577; FPM 362; Mayur. 121.

Leaves 7-22 x 4-10 cm, elliptic. Flowers c. 5 cm across, rosy-pink, in terminal panicles. Capsules c. 2.5 cm across, woody.

Commonly cultivated in gardens as an ornamental. Fl.: February-April. Fr.: March-July. Tamil: Poomaruthu.

Lawsonia L.

Lawsonia inermis L. Sp.Pl. 349. 1753; FPM 363; Mayur 122; FTN 1:165. *L. alba* Lam. Encycl. 3:106. 1789; Brown 61; FBI 2:573.

Shrubs, up to 5 m tall. Leaves 2-5 x 1-2.5 cm, elliptic. Flowers c. 7 mm across, in terminal and axillary panicles. Capsules c. 8 mm across.

Commonly cultivated around houses. Fl.: February-August. Fr.: throughout the year.

Leaves yield a reddish-brown dye. Leaves ground into a paste and the paste applied to palms and nails of women. In a few hours, the dye colours the skin. Apart from the colour, it is supposed to have cooling effect. Tamil: Maruthaani.

Nesaea Commers. ex HBK

Nesaea lanceolata (Heyne ex Clarke) Koehne in Engler, Bot. Jahrb. Syst. 3:325. 1882; FPM 360; Mayur. 121; FTN 1:166. *Ammania lanceolata* Heyne ex Clarke in Hook.f. Fl.Brit. India 2:570. 1879.

Leaves 25-35 x 8-13 mm, oblong-lanceate, base subcordate. Flowers c. 3 mm across, greenish, subsessile, in axillary fascicles. Capsules c. 2 mm across.

A weed of moist, shady places; rare. Fl. & Fr.: November-February.

Rotala L.

- | | | |
|---------------------------------------|---------|-------------------------|
| 1. Leaves whorled | .. .. . | <i>R. verticillaris</i> |
| 1. Leaves opposite: | | |
| 2. Calyx appendaged between lobes | .. .. . | <i>R. pentandra</i> |
| 2. Calyx not appendaged between lobes | .. .. . | <i>R. indica</i> |

Rotala indica (Willd.) Koehne in Engler, Bot.Jahrb. Syst. 1:172. 1881; FPM 359; Mayur. 119; van Leeuwen in Blumea 19:54. 1971; Cook in Boissiera 29:108. 1979; FTN 1:166. *Peplis indica* Willd. Sp.Pl. 2:244. 1799. *Ammannia peploides* Spreng. Syst.Veg. 1:444. 1825; FBI 2:566.

A weed of rice fields, ditches and ponds; rare. Fl. & Fr.: November-March.

Rotala pentandra (Roxb.) Blatter & Hallb. in J. Bombay Nat.Hist. Soc. 25:707. 1918 p.p.; van Leeuwen 55; FTN 1:166. *Ammannia pentandra* Roxb. Fl.Ind. 1:448. 1820; FBI 2:568 p.p. *Rotala leptopetala* (Blume) Koehne in Engler, Bot. Jahrb. Syst. 1:162. 1881; FPM 358; Mayur. 120. *Ammannia leptopetala* Blume, Mus. Bot.Lugduno-Batavum 2:134. 1856.

Stems erect or suberect, upto 20 cm long. Leaves 10-15 x 3-5 mm, oblong-elliptic. Flowers c. 2 mm across, pale white, solitary, axillary. Capsules c. 2 mm across, reddish.

A weed of rice fields, ponds and ditches; fairly common. Fl. & Fr.: November-March.

Rotala verticillaris L. Mant. Alt. 175. 1771; FPM 358; Mayur. 119; Cook 23; FTN 1:167. *Ammannia rotala* auct. non F.v.Muell. 1862-1863; FBI 2:567.

Stems erect, upto 10 cm tall. Leaves 8-13 x 0.5-1 mm, linear-filiform. Flowers c. 1.5 mm across, pale pink, sessile, axillary, 3-merous. Capsules c. 1.5 mm across, 3-valved.

A weed of shallow lakes, ditches and rice fields; fairly common. Fl. & Fr.: November-April.

Rotala densiflora (Roth ex Roem. & Schult.) Koehne in Engler, Bot. Jahrb. Syst. 1:164. 1880; FPM 274; Mayur. 120; van Leeuwen in Blumea 19:55. 1971; Cook in Boissiera 29:82. 1979; FTN 1:166. *Ammannia densiflora* Roth ex Roem. & Schult. Syst. Veg. 3:304. 1818.

Mayuranathan records this.

SONNERATIACEAE

Sonneratia L.f. (nom.cons.)

Sonneratia apetala Buch.-Ham. in Symes, Embassy Ava 3:477. 1800; FBI 2:579; FPM 363; Mayur. 122; Backer & Steenis in Steenis, Fl. Males. ser. 1.4:286. 1951; FTN 1:167.

Mayuranathan records this. Tamil: Marama.

ONAGRACEAE

Ludwigia L.

- | | | |
|---|---------|------------------------|
| 1. Stems with spongy floats at nodes | .. .. . | <i>L. adscendens</i> |
| 1. Stems without spongy floats at nodes: | | |
| 2. Seeds in one row in each locule | .. .. . | <i>L. hyssopifolia</i> |
| 2. Seeds in 2 or more rows in each locule | .. .. . | <i>L. perennis</i> |

Ludwigia adscendens (L.) Hara in J. Jap.Bot. 28:290. 1953; Sreemadh. in BBSI 8:79. 1966; Raven in Steenis, Fl. Males.ser. 1.8:104. 1977; FTN 1:167. *Jussiaea adscendens* L. Mant. Pl. 69. 1767. *J. repens* L. Sp.Pl. 388. 1753 non *Ludwigia repens* Forst. 1771; Wood 260; FBI 2:587; FPM 365; Mayur. 123.

Prostrate herbs; branches floating or creeping, rooting at nodes. Leaves 2-5 x 1-3 cm, obovate, base attenuate. Flowers c. 2.5 cm across, cream-coloured, axillary, solitary. Capsules upto 3.5 cm long.

A weed of fresh-water ponds and lakes; fairly common. Fl. & Fr.: October-April.

Ludwigia hyssopifolia (G.Don) Exell, Garcia de Orta 5:471. 1957; Sreemadh. 79; Bennet in Indian Forester 92:227. 1966; Raven 104; FTN 1:167. *Jussiaea hyssopifolia* G.Don, Gen.Syst. 2:693. 1832. *J. linifolia* Vahl, Eclog. Amer. 2:32. 1798 non *Ludwigia linifolia* Poir. 1813; FPM 1298. *Fissendocarpa linifolia* (Vahl) Bennet in J. Bombay Nat. Hist.Soc. 67:126. 1970.

Herbs, upto 1 m tall; stems 4-angled. Leaves 5-12 x 2-4 cm, elliptic, lateral veins prominent. Flowers c. 6 mm across, yellow, solitary, axillary. Capsules upto 2 cm long.

A weed of moist places; rare. Fl. & Fr.: October-March.

Ludwigia perennis L. Sp.Pl. 119. 1753. excl. foliis oppositis; Sreemadh. 80; Raven 103; FTN 1:168. *L. parviflora* Roxb. Fl. Ind. 1:440. 1820; Wood 260; FBI 2:588; FPM 365; Mayur. 124.

Herbs, upto 50 cm tall. Leaves 30-50 x 4-5 mm, linear to linear-elliptic, base attenuate, lateral veins obscure. Flowers c. 7 mm across, yellow, solitary, axillary. Capsules upto 13 x 3 mm, 4-angled.

A weed of rice fields, ditches and near lakes; common. Fl. & Fr.: throughout the year.

TURNERACEAE

Trapa L.

Trapa natans L.Sp.Pl.120. 1753; Daniel et al. in J.Econ. Tax. Bot. 4:595. 1983. *Trapa natans* L. var. *bispinosa* (Roxb.) Makino in Inuma Somuku-Dzusetsu ed. 3.1:137. 1907; FTN 1:168. *T. bispinosa* Roxb. Pl.Cor.1.234. 1815; Wood 261; FBI 2:590; FPM 366; Mayur. 123.

Mayuranathan records this. Tamil: Singaarakkaai.

TURNERACEAE

Turnera L.

Flowers cream-coloured, with purplish centre	.. .. .	<i>T. subulata</i>
Flowers bright yellow, without purplish centre	.. .. .	<i>T. ulmifolia</i>

Turnera subulata Smith in Rees, Cyclop. 36:1702. 1819; Backer in Steenis, Fl.Males.ser. 1.4:236. 1951; FTN 1:169. *T. ulmifolia* L. var. *elegans* (Otto) Urb. Monog. Turn. 139. 1883; FPM 369. *T. elegans* Otto in Nees, Hor. Phys. Berol. 36. 1820. *T. trioniflora* Sims.in Curtis, Bot.Mag. 2106. 1820; Brown 74; Mayur. 125. - Plate 12 A-E.

Undershrubs, upto 50 m tall. Leaves 3-5.5 x 1-3.5 cm, ovate-elliptic, biglandular at base, margin serrate. Flowers c. 4 cm across, axillary, solitary. Capsules c. 7 mm across, subglobose.

A weed along railway tracks, sandy seashore and other waste places; common. Fl. & Fr.: throughout the year. Native of the West Indies.

Turnera ulmifolia L. Sp. Pl. 271. 1753; Backer 237; FTN 1:169. *T. ulmifolia* L. var. *angustifolia* (Mill.) Willd. ex Urb. Monog. Turn. 141. 1883; Brown 74; FPM 369; Mayur. 124. *T. angustifolia* Mill. Gard. Dict. ed. 8. n. 2. 1768. - Plate 12 F.

Undershrubs, up to 70 cm tall. Leaves 7-14 x 2-4 cm, lanceate, biglandular at base, margin biserrate. Flowers c. 3.5 cm across; pedicels adnate to petioles. Capsules c. 8 mm across, ovoid.

A weed along railway tracks and other waste places; rare. Fl. & Fr.: throughout the year. Native of the West Indies.

PASSIFLORACEAE

Flowers over 2 cm across	.. .. .	<i>Passiflora</i>
Flowers under 1 cm across	.. .. .	<i>Adenia</i>

Adenia Forssk.

Adenia wightiana C Wall. ex Wight & Arn.) Engler in Bot. Jahrb. Syst. 14:376. 1891; FPM 371; FTN 1:169. *Modecca wightiana* Wall. ex Wight & Arn. Prodr. 353. 1834; FBI 2:601.

Climbing herbs; twigs glabrate. Leaves 5-10 x 3-8 cm, ovate, shallowly or deeply lobed. Flowers c. 4 mm across, greenish, in axillary, tendrillar peduncles. Capsules c. 2.5 x 1.7 cm, orange-red, loculicidal.

In scrub jungles; rare. Fl. & Fr.: February-August.

Passiflora L.

Passiflora foetida L. Sp. Pl. 959. 1753; Brown 73; FPM 370; Mayur. 125; Chakrav. in BBSB 3(1):57. 1949; Wilde in Steenis, Fl. Males. ser. 1.7:410. 1972; FTN 1:169. - Plate 13 A-B

Climbing herbs; twigs glandular-pubescent. Leaves 8-11 x 6-8.5 cm, palmately 3-lobed, base cordate. Flowers c. 3 cm across, axillary, solitary; corolline corona of filiform appendages, purplish. Fruits indehiscent.

A weed of waste places, often climbing over fences and hedges; fairly common. Fl. & Fr.: August-March.

Fruits edible. Native of tropical America.

Passiflora suberosa L. Sp. Pl. 958. 1753; Barnes 17; Chakrav. 54; Wilde 411.

Barnes records this.

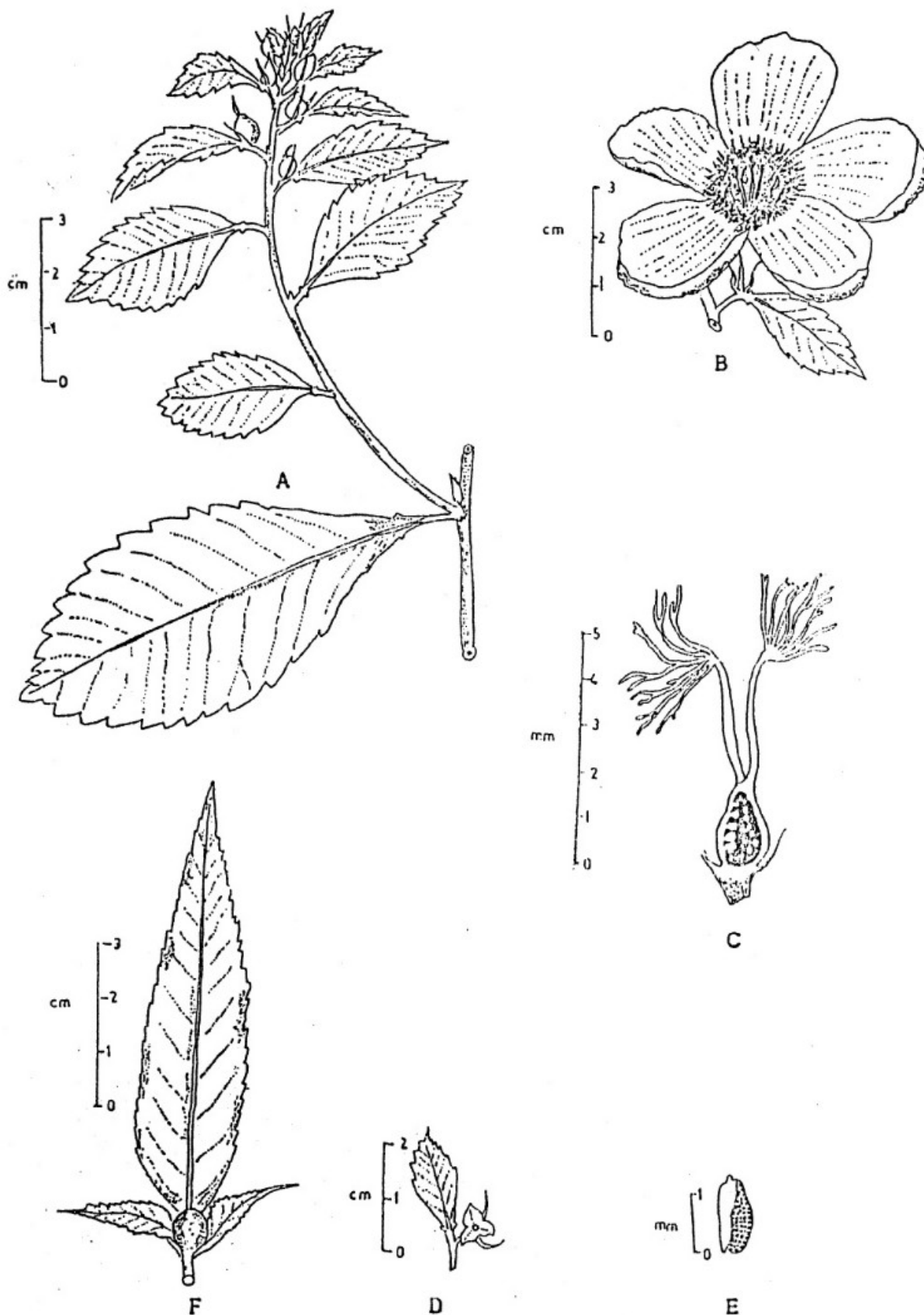


PLATE 12: A,B,C,D & E - *Turnera subulata* Smith (twig, flower, L.S. of gynoecium, fruit and seed).
 F - *T. ulmifolia* L. (leaf with fruit and bracteoles).

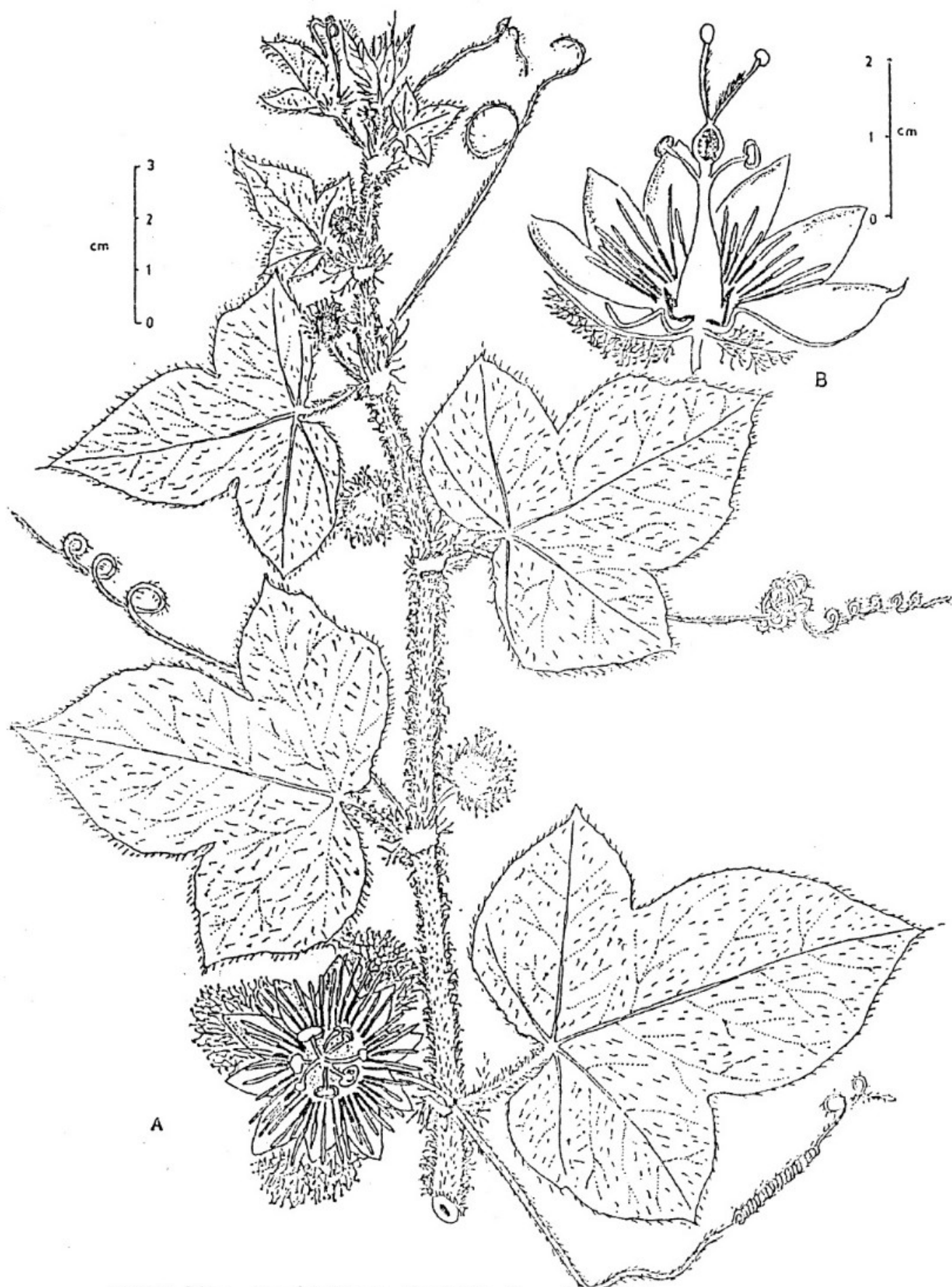


PLATE 13: *Passiflora foetida* L. A - Twig.
B - L.S. of flower.

CARICACEAE

Carica L.

Carica papaya L. Sp.P1. 1036. 1753; Brown 71; FBI 2:599; FPM 371; Mayur. 126; FTN 1:170.

Dioecious trees with soft stems, up to 8 m tall. Leaves 40-70 x 45-75 cm, palmately-parted. Flowers 5-10 cm across, cream-coloured, the staminate in axillary panicles, the pistillate in axillary fascicles or solitary. Fruits up to 30 x 20 cm.

Commonly cultivated around houses. Fl. & Fr.: throughout the year.

Fruits edible. Tamil: Papaali. English: The papaya. Native of tropical America.

CUCURBITACEAE

- | | | |
|---|---------|----------------------|
| 1. Corolla lobes fimbriate | .. .. . | <i>Trichosanthes</i> |
| 1. Corolla lobes not fimbriate: | | |
| 2. Tendrils simple: | | |
| 3. Leafy bracts present in the leaf axils or on pedicels: | | |
| 4. Fruits with soft spines | .. .. . | <i>Momordica</i> |
| 4. Fruits without spines | .. .. . | <i>Ctenolepis</i> |
| 3. Leafy bracts absent from leaf axils and pedicels: | | |
| 5. Fruits red when ripe: | | |
| 6. Corollas over 2 cm across | .. .. . | <i>Coccinia</i> |
| 6. Corollas under 1 cm across: | | |
| 7. Style surrounded by an annular disc: | | |
| 8. Fruits beaked | .. .. . | <i>Solena</i> |
| 8. Fruits not beaked | .. .. . | <i>Mukia</i> |
| 7. Style not surrounded by an annular disc: | | |
| 9. Fruits transversely dehiscent near the base | .. .. . | <i>Corallocarpus</i> |
| 9. Fruits not transversely dehiscent | .. .. . | <i>Kedrostis</i> |
| 5. Fruits not red when ripe | .. .. . | <i>Cucumis</i> |
| 2. Tendrils branched: | | |
| 10. Staminate flowers in long-peduncled racemes | .. .. . | <i>Luffa</i> |
| 10. Staminate flowers solitary or in fascicles: | | |
| 11. Lobes of leaves pinnately incised | .. .. . | <i>Citrullus</i> |
| 11. Lobes of leaves not pinnately incised: | | |
| 12. Leaves lobed for more than half way down | .. .. . | <i>Diplocyclos</i> |
| 12. Leaves lobed for less than half way down: | | |
| 13. Corolla yellow: | | |
| 14. Calyx lobes linear, erect | .. .. . | <i>Cucurbita</i> |
| 14. Calyx lobes not linear, not erect | .. .. . | <i>Benincasa</i> |
| 13. Corolla white | .. .. . | <i>Lagenaria</i> |

Benincasa Savi

Benincasa hispida (Thunb.) Cogn. in DC. Monog. Phan. 3:513. 1881; Chakrav. in RBSI 17:84. 1959 & FFI 11:9. 1982; FTN 1:170. *Cucurbita hispida* Thunb. Fl. Jap. 322. 1784. *Benincasa cerifera* Savi in Biblioth. Ital. 9:158. 1818; FBI 2:616; FPM 383; Mayur. 129.

Climbers with 2-3-fid tendrils. Leaves 15-27 x 16-28 cm, suborbicular, obscurely 3-7-lobed, scabrous. Flowers c. 10 cm across, solitary, axillary; calyx lobes c. 1.3 x 1 cm. Fruits up to 35 x 30 cm, hispid, greenish-white.

Commonly cultivated in fields, also runs wild. Fl. & Fr.: December-April.

Fruits used as vegetable. Tamil: Poosani.

Citrullus Schrader (nom.cons.)

Citrullus colocynthis (L.) Schrader in Linnaea 12:414. 1838; FBI 2:620; FPM 378; Mayur. 131; Chakrav. FFI 11:20. 1982; FTN 1:170. *Cucumis colocynthis* L. Sp.Pl. 1011. 1753; Brown 69. *Colocynthis vulgaris* Schrader in Pl. Sem. Hort. Gotting 2. 1833; Chakrav. in RBSI 17:133. 1959.

Prostrate or climbing herbs. Leaves 12-25 x 10-18 cm, palmately 3-parted. Flowers 2-3 cm across, pale yellow. Fruits up to 6 cm across, globose, variegated.

A weed of waste places; rare. Fl.: August-December. Fr.: October-March. Tamil: Paeikkumatti.

Citrullus lanatus (Thunb.) Matsumura & Nakai in Cat. Sem. Spor. Hort. Bot. Univ. Imp. Tokyo 1916:30. 1916; Hara in Taxon 18:346. 1969; Chakrav. FFI 22; FTN 1:170. *Momordica lanata* Thunb. Prodr. Pl. Cap. 13. 1794. *Citrullus vulgaris* Schrader ex Eckl. & Zeyher, Enum. 279. 1836; FBI 2:621; FPM 379; Mayur. 131.

Mayuranathan records this, cultivated. Tamil: Dharbooshani. English: The Water Melon.

Coccinia Wight & Arn.

Coccinia gran. (L.) Voigt, Hort. Sub. Calc. 59. 1845; Chakrav. FFI 11:24. 1982; FTN 1:170. *Bryonia grandis* L. Mant. Pl. 126. 1767. *Cephalandra indica* (Wight & Arn.) Naud. in Ann. Sci. Nat. Bot. ser. 5.5:16. 1866; FBI 2:621 excl. syn. *Coccinia indica* Wight & Arn. Prodr. 347. 1834; FPM 379; Mayur. 132. *C. cordifolia* auct. non (L.) Cogn. 1881; Chakrav. in RBSI 17:117. 1959.

Climbers. Leaves 4-8 x 3.5-7 cm, ovate, 5-angled or shallowly lobed, glandular beneath at base and often along margins, glabrous. Flowers c. 2.7 cm across, white, axillary, solitary. Fruits up to 6 x 3.5 cm, cylindric.

In scrub jungles, on hedges and thickets; common. Fl. & Fr.: August-April. Tamil: Kovai kaai.

Corallocarpus Hook. f.

Corallocarpus epigaeus (Rottl. & Willd.) Clarke in Hook. f. Fl.Brit. India 2:628. 1879; FPM 382; Mayur. 134; Chakrav. in RBSI 17:171. 1959 & FFI 11:28. 1982; FTN 1:170. *Bryonia epigaea* Rottl. & Willd. in Ges. Naturf. Freunde Berlin Neue Schriften ser. 4. 212. 1803.

Climbers. Leaves 3-5.5 x 2.8-5.3 cm, deeply 3-5-lobed, lobes serrate to subentire. Flowers c. 5 mm across, cream-coloured, the staminate in axillary racemes and the pistillate solitary. Fruits c. 1.7 cm across, ovoid, beaked at apex, reddish in the middle when ripe, greenish at base and apex.

In scrub jungles and on hedges; rare. Fl. & Fr.: January-April.

Tuberous roots of peculiar shapes, considered sacred and hung in houses to ward off evil spirit. Tamil: Aagaasa garudan.

Ctenolepis Hook.f.

Ctenolepis garcinii (Burm.f.) Clarke in Hook.f.Fl.Brit.India 2:629. 1879; FTN 1:171. *Sicyos garcinii* Burm. f. Fl.Ind. 211. 1768. *Blastania garcinii* (Burm.f.) Cogn. in DC. Monog. Phan. 3:629. 1881; FPM 381; Mayur. 133; Chakrav. in RBSI 17:175. 1959 & FFI 11:13. 1982.

Climbers. Leaves 3-5 x 3.2-5.2 cm, digitately 5-7-lobed or parted, lobes often sinuate or lobed again; bracts axillary, stipuliform, pectinate. Flowers c. 4 mm across, the staminate in axillary racemes and pistillate solitary. Fruits c. 7 mm across.

In jungles, thickets and on fences; fairly common. Fl. & Fr.: November-March.

Cucumis L.

Fruits under 5 cm long	.. .. .	<i>C. melo</i> var. <i>agrestis</i>
Fruits over 10 cm long	.. .. .	<i>C. sativus</i>

Cucumis melo L. var. *agrestis* Naud. Ann. Sci.Nat.Bot. ser. 4.11:73. 1859 & 12:110. 1859; Chakrav. FFI 11:35.1982. *Cucumis pubescens* Willd. Sp.Pl.4:614. 1805; FPM 378; Mayur. 130.

Prostrate or climbing herbs; stems bristly. Leaves 4-10 x 3.8-9.5 cm, suborbicular to reniform, often 3-5-angled or slightly lobed, scabrous. Flowers c. 1.5 cm across, yellow, solitary or fascicled, axillary. Fruits up to 3.5 x 2.3 cm, ovoid, striped dark and light green.

A weed of waysides and waste places; fairly common.

Cucumis sativus L. Sp.Pl. 1012. 1753; Brown 69; FBI 2:620; FPM 378; Mayur. 131; Chakrav. in RBSI 17:105. 1959 & FFI 36; FTN 1:171.

Prostrate or climbing herbs; stems bristly. Leaves 7-18 x 6-16 cm, palmately 5-7-lobed, scabrous, distantly denticulate. Flowers c. 3 cm across, yellow, axillary. Fruits up to 25 x 9 cm.

Commonly cultivated in fields, also runs wild. Fl. & Fr.: January-May.

Fruits used as vegetable. Tamil: Vellarikkaai. English: The cucumber.

Cucumis melo L. Sp.Pl. 1011.1753. var. **melo**; Brown 68; FBI 2:620; FPM 378; Mayur. 131; Chakrav. FFI 34; FTN 1:171.

Brown and Mayuranathan record this as cultivated. Tamil: Mulaam Pazham. English: The Melon.

Cucumis prophetarum L. in Torner, Cent. Pl.1:33. 1755; FBI 2:619; FPM 378; Mayur. 130; Chakrav. FFI 35.

Mayuranathan records this.

Cucurbita L.

Cucurbita maxima Duchesne ex Lam. Encycl. 2:151. 1786; Brown 70; FBI 2:622; FPM 383; Mayur. 132; Chakrav. in RBSI 17:123. 1959 & FFI 11:40. 1982; Jeffrey in Kew Bull. 34:799. 1980; FTN 1:171.

Prostrate or climbing herbs. Leaves 15-23 x 17-25 cm, suborbicular, 5-7-angled or obscurely lobed. Flowers c. 10 cm across, yellow, solitary, axillary. Fruits up to 30 x 25 cm, subglobose.

Commonly cultivated in fields and around houses, also runs wild. Fl. & Fr.: November-March.

Fruits used as vegetable. Tamil: Parangikaai. English: The Pumpkin.

Diplocyclos (Endl.) Post et Kuntze

Diplocyclos palmatus (L.) Jeffrey in Kew Bull. 15:352. 1962; Chakrav. FFI 11:48. 1982; FTN 1:172. *Bryonia palmata* L. Sp.Pl. 1012.1753. *Bryonopsis laciniosa* auct. non Naud. 18 9X5 FPM 377; Mayur. 130; Chakrav. in RBSI 17:135. 1959.

Climbing herbs. Leaves 10-12 x 9-11 cm, palmately 5-7-parted; lobes serrate. Flowers c. 9 mm across, axillary. Fruits c. 1.8 cm across, globose, reddish, with 8-9 white, longitudinal lines.

In scrub jungles and thickets; common. Fl. & Fr.: November-April.

Kedrostis Medik

Kedrostis foetidissima (Jacq.) Cogn. in DC. Monog.Phan. 3:634. 1881; FTN 1:172. *Trichosanthes foetidissima* Jacq.Coll.Bot. 2:341. 1789. *Kedrostis rostrata* (Rottl.) Cogn. in DC. Monog.Phan. 3:636. 1881; FPM 381; Mayur. 133; Chakrav. in RBSI 17:169. 1959 & FFI 11:64. 1982. *Bryonia rostrata* Rottl. in Ges. Naturf. freunde Berlin Neue Schriften ser.4.213. 1803.

Prostrate or climbing herbs. Leaves 2-5 cm across, sub-orbicular, 5-angled or slightly 5-lobed, distantly denticulate. Flowers c. 6 mm across, cream-coloured, the staminate in axillary racemes and the pistillate solitary, axillary. Fruits c. 2 x 1.8 cm, ovoid, beaked at apex.

In scrub jungles and thickets; rare. Fl. & Fr.: November-March.

Lagenaria Ser.

Lagenaria siceraria (Molina) Standley in Publ. Field Mus. Nat.Hist. Chicago Bot. ser. 1.3:435. 1930; Chakrav. FFI 11:651. 1982; FTN 1:172. *Cucurbita siceraria* Molina, Sagg.Chil. 133:335. 1782. *Lagenaria vulgaris* Ser. in Mem. Soc. Phys. Geneve 3(1):25.s.2. 1825; Brown 68; FBI 2:613; FPM 383; Mayur. 128.

Climbers. Leaves 20-28 x 18-27 cm, suborbicular, 5-7-angled or lobed, softly pubescent. Flowers c. 5 cm across, axillary, solitary. Fruits up to 30 x 13 cm, hemispheric to cylindrical, epiaarp woody at maturity.

Commonly cultivated around houses. Flowers open in the evening and close on the next day forenoon. Fl. & Fr.: December-April.

Fruits used as vegetable. Tamil: Sorakkaai. English: The Bottle Gourd.

Luffa Mill.

Fruits with sharp longitudinal ridges	.. .. .	<i>L. acutangula</i>
Fruits without sharp longitudinal ridges	.. .. .	<i>L. cylindrica</i>

Luffa acutangula (L.) Roxb. Fl. Ind. 3:173. 1832; FBI 615; FPM 377; Mayur. 129; Chakrav. FFI 11:67. 1982; FTN 172. *Cucumis acutangula* L. SP.Pl. 1011. 1753.

Climbers. Leaves 20-30 x 18-29 cm, suborbicular, obscurely 5-9-lobed, margin dentate to subentire. Flowers yellow, the staminate c. 5 cm across and the pistillate c.7 cm across. Fruits up to 32 x 6 cm.

Commonly cultivated around houses and in fields. Flowers open in the evening and close the next morning. Fl. & Fr.: throughout the year.

Young fruits used as vegetable. Tamil: Peerkkankaai.

Luffa cylindrica (L.) Roem. Syn. Monog. 2:63. 1846; Chakrav. in RBSI 17:75. 1959 & FFI 11:70. 1982; Jeffrey in Kew Bull. 15:355. 1962; FTN 1:172. *Momordica cylindrica* L. Sp.Pl.1009. 1753. *Luffa aegyptiaca* Mill. Gard. Dict. ed.8.68; Brown 71, FBI 2:614; FPM 376; Mayur. 129.

Climbers. Leaves 15-20 x 13-18 cm, shallowly 5-7-lobed, in distantly denticulate to subentire. Flowers yellow, staminate c. 4 cm across and the pistillate c. 6 cm across. Fruits up to 25 x 6 cm, greenish-white.

Occasionally cultivated around houses. Flowers open in evening and close the next morning. Fl. & Fr.: December-April.

Old fruits yield a flesh-brush (fibrous skeleton). Fruits sometimes used as vegetable. Tamil: Mozhukkuppeerakkan Kaai.

Momordica L.

under 6 cm long *M. charantia* var. *muricata*
 over 6 cm long *M. charantia* var. *charantia*

Momordica charantia L. Sp.Pl. 1009. 1753 var. *charantia*; Brown 69; FBI 2:616; FPM 375; Mayur. 128; Chakrav. in RBSI 17:88. 1959 & FFI 11:89. 1982; FTN 1:173.

Climbers. Leaves 6-13 x 5-12 cm, palmately 7-parted; lobes 2-7 x 1-4 cm, elliptic, margin obscurely dentate. Flowers c. 2.5 cm across, axillary, solitary. Fruits up to 18 x 4 cm.

Commonly cultivated around houses and in fields. Fl. & Fr.: November-April.

Unripe fruits used as vegetable. Tamil: Paavakkaai. English: The Bitter Gourd.

Momordica charantia L. var. *muricata* (Willd.) Chakrav. FFI 11:92. 1982; FTN 1:173. *M. muricata* Willd. Sp.Pl. 4:602. 1805; Brown 70.

Climbers. Leaves 5-10 x 4-9 cm, palmately 7-parted; lobes 1.5-5 x 1-3 cm, elliptic, pinnately lobed or obscurely dentate. Flowers c. 2.2 cm across, yellow, solitary, axillary. Fruits up to 5 x 3.5 cm.

Cultivated around houses and in fields, frequently runs wild along roadsides and railway tracks; common. Fl. & Fr.: September-May.

Unripe fruits used as vegetable. Tamil: Mithi-paavakkaai.

Momordica dioica Roxb. ex Willd. Sp.Pl. 4:605. 1805; FBI 2:617; FPM 375; Mayur. 128; Chakrav. in RBSI 91 & FFI 94; FTN 1:173.

Mayuranathan records this.

Mukia Arn.

Mukia maderaspatana (L.) Roem. Syn. Monog. 247. 1846; Chakrav. FFI 11:83. 1982; FTN 1:173. *Cucumis maderaspatanus* L. Sp.Pl. 1012. 1753. *Melothra maderapatana* (L.) Cogn. in DC. Monog. Phan. 3:623. 1881; FPM 380; Mayur. 132; Chakrav. in RBSI 17:141. 1959. *Mukia scabrella* (L.f.) Arn. in. Hook. London J.Bot. 3:276. 1844; FBI 2:623 excl. syn. *Bryonia scabrella* L.f. Suppl. Pl. 424. 1781; Brown 69.

Climbing herbs. Leaves 5-11 x 4-10 cm, palmately 5-angled, base hastate. Flowers c. 5 mm across, axillary. Fruits c. 9 x 8 mm, subglobose, hirsute.

In waste places and thickets, also in scrub jungles; common. Fl. & Fr.: September-March. Tamil: Musumusukkai.

Solena Lour.

Solena amplexiculis (Lam.) Gandhi in Saldanha & Nicolson, Fl. Hassan Dist. 179. 1976; FTN 1:173. *Bryonia amplexicaulis* Lam. Encycl. 1:496. 1785. *Melothria amplexicaulis* (Lam.) Cogn. in DC. Monog. Phan. 3:621. 1881; FPM 380; Chakrav. FFI 11:77. 1982. *Melothria heterophylla* (Lour.) Cogn. in DC. Monog. Phan. 3:618. 1881; FPM 380; Mayur. 133; Chakrav. in RBSI 17:159. 1959. *Solena heterophylla* Lour. Fl. Cochinch. 514. 1790. - Plate 14 A-C.

Slender climbers. Leaves 2-5 x 1-4 cm, ovate to lanceate, 3-angled or shallowly 3-lobed, base sagittate or hastate, 5-veined. Flowers c. 5 mm across. Fruits up to 1.5 x 1 cm.

In scrub jungles and on hedges; fairly common. Fl. & Fr.: January-October.

Trichosanthes L.

Fruits cylindric	.. .. .	<i>T. cucumerina</i>
Fruits globose	.. .. .	<i>T. tricuspidata</i>

Trichosanthes cucumerina L. Sp.Pl. 1008. 1753; FBI 2:609; FPM 373; Chakrav. in RBSI 17:31. 1959; FTN 1:174. *T. anguina* L. Sp.Pl. 1008. 1753; Brown 70; FBI 2:160; FPM 374; Mayur. 127; Chakrav. FFI 11:108. 1982.

Climbers. Leaves 10-28 x 9-27 cm, obscurely or shallowly 5-9-lobed, softly pubescent. Flowers 3-4 cm across, white, the staminate in long-peduncled axillary corymbs and the pistillate solitary, axillary. Fruits up to 100 x 7 cm.

Commonly cultivated around houses and in fields. Fl. & Fr.: November-April.

Fruits used as vegetables. Tamil: Pudalai. English: The Snake Gourd.

Trichosanthes tricuspidata Lour. Fl. Cochinch. 589. 1790; FTN 1:174. *T. bracteata* (Lam.) Voigt, Hort. Sub. Calc. 58. 1845; Brown 70; Chakrav. in RBSi 44 & FFI 109. *Modecca bracteata* Lam. Encycl. 4:210. 1796. *Trichosanthes palmata* Roxb. Fl. Ind. 3:704. 1832; FBI 2:606; FPM 374; Mayur. 127.

Climbers. Leaves 10-16 x 9-15 cm, palmately 5-cleft or parted, the terminal lobe largest, lobes undulate to distantly serrate. Flowers c. 4 cm across, white. Fruits c. 6 cm across, red when ripe.

In jungles and on hedges; fairly common. Leaves with scattered sessile glands beneath. Fl. & Fr.: September-January.

CACTACEAE

1. Stems sharply angled	.. .. .	<i>Acanthocereus</i>
1. Stems flattened:		
2. Stems with spines more than 1 cm long	.. .. .	<i>Opuntia</i>
2. Stems without spines or with spines less than 0.5 cm long	.. .. .	<i>Nopalea</i>

Acanthocereus (Berg.) Britton & Rose

Acanthocereus tetragonus (L.) Humlk. in Suc. 20:11.165. 1938; FTN 1:176. *Cactus tetragonus* L. Sp.Pl.466. 1753.

Shrubs, up to 5 m tall; stems columnar, 3-5-angled, dark green, succulent. Leaves minute, succulent, caducous; spines up to 2.5 cm long, in axillary clusters along angles of stems. Flowers c. 13 cm across, white, solitary. Berries c. 6 cm across, subglobose.

Commonly cultivated along fences and rockeries, also runs wild. Fl.: June-August. Fr.: July-October.

Nopalea Salm - Dyck

Nopalea cochenillifera (L.) Salm - Dyck. Cact. Hort. Dyck. ed.2.64. 1850; FTN 1:176. *Cactus cochenillifer* L.Sp.Pl. 468. 1753. *Opuntia cochinellifera* (L.) Mill.Gard. Dict. ed. 8.n.6. 1768; Brown 77; FPM 387; Mayur. 135, "*coccinellifera*". -Plate 15 A-C.

Shrubs or trees, up to 6 m tall; cladodes 15-25 x 10-15 cm, obovate, dark green. Leaves minute, succulent, caducous; spines apparently absent; bristles in axillary clusters, sharp-pointed. Flowers 5-8 cm long, red; stamens longer than perianth. Berries c. 4 cm across.

Occasionally cultivated in rockeries as an ornamental, also runs wild. Fl. & Fr.: October-April. Tamil: Chappaathi kalli.

Opuntia Mill.

1. Spines 3 or more together:

2. Flowers yellow

.. .. *O. dillenii*

2. Flowers pinkish

.. .. *O. elatior*

1. Spines solitary

.. .. *O. vulgaris*

Opuntia dillenii (Ker-Gawl.) Haw. Suppl. Pl.Succ. 79. 1819; Brown 77; FBI 2:657; Burkill in RBSI 4:294. 1911; FPM 387; Mayur. 136; FTN 1:176. *Cactus dillenii* Ker-Gawl. in Edward's Bot. Reg. 3:t.255. 1818.

Shrubs, up to 1.5 m tall; cladodes 12-18 x 9-12 cm, obovate, pale green. Leaves minute, succulent, caducous; spines up to 2.5 cm long, pale yellow, in axillary clusters; bristles numerous, in axillary clusters, sharp-pointed. Flowers 5-7 cm across. Berries c. 5 cm across, pinkish when ripe.

Along roadsides, railway tracks, sandy seashores etc., sometimes cultivated in rockeries and hedges; common. Fl. & Fr.: throughout the year.

Fruits eaten by children. Tamil: Chappaathi kalli.

Opuntia elatior Mill.Gard. Dict. ed. 8.n.4. 1768; FPM 387; Mayur. 136; FTN 1:176. - Plate 15 D.

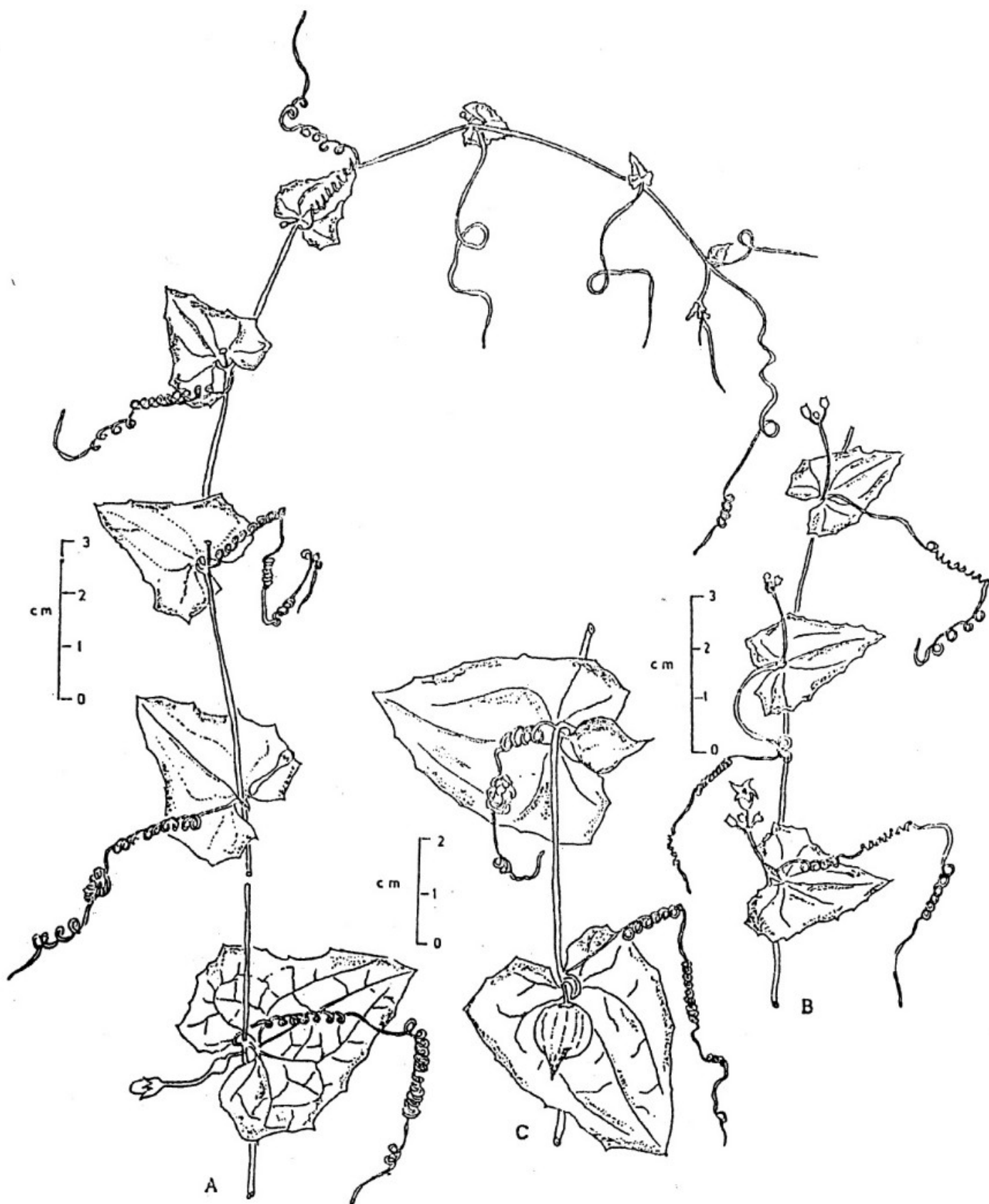
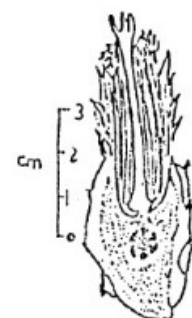
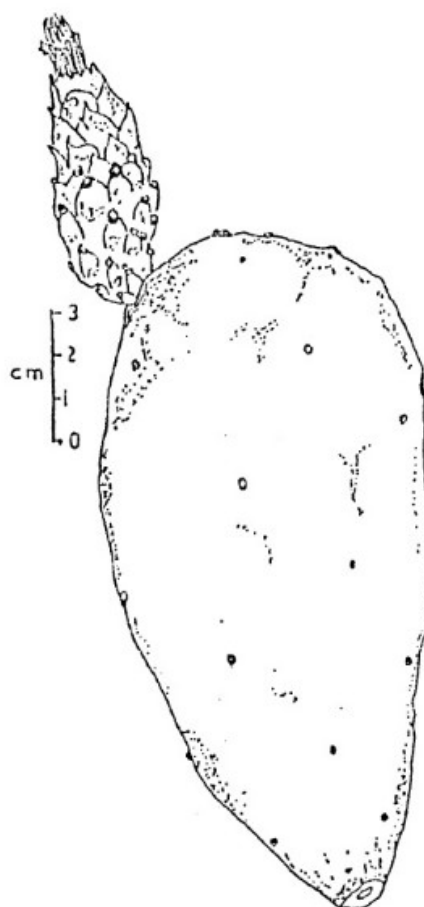


PLATE 14: *Solena amplexicaulis* (Lam.) Gandhi

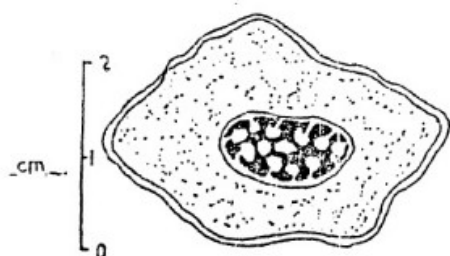
A - Twig with pistillate flowers. B - Twig with staminate flowers. C - Twig with fruits.



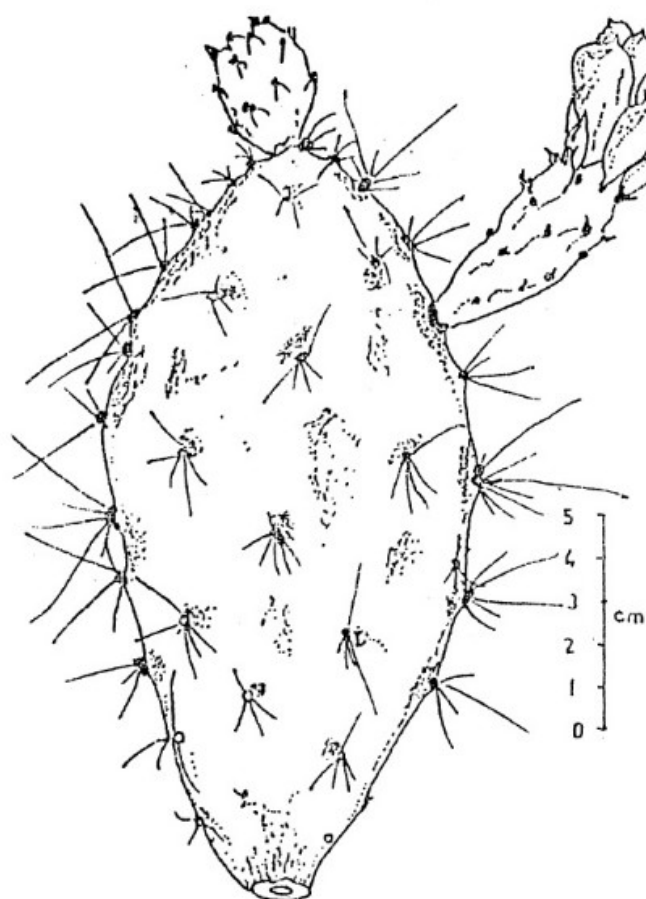
B



A



C



D

PLATE 15: A, B & C - Nopalea cochenillifera (L.) Salm-Dyck.
(Phylloclade with flower, L.S. of flower and
C.S. of ovary). D - Opuntia elatior Mill.

Shrubs, up to 2 m tall; cladodes 13-20 x 10-14 cm, obovate-elliptic, dark green. Leaves minute, succulent, caducous; spines up to 2.5 cm long, greyish-brown, in axillary clusters; bristles numerous, in axillary clusters, sharp-pointed. Flowers 4-5 cm across. Berries c. 4.5 cm across, pink when ripe.

Along roadsides, waste places and scrub jungles, also cultivated in rockeries and hedges; fairly common. Fl. & Fr.: July-December.

Fruits eaten by children. Tamil: Chappaathi kalli.

Opuntia vulgaris Mill. Gard. Dict.ed. 8.n.1. 1768; Mayur. 136; FTN 1:176. *Opuntia monacantha* (Willd.) Haw.Suppl. Pl. Succ. 81. 1819; Burkill 312; FPM 387. *Cactus monacanthos* Willd. Enum.Pl.Suppl. 33. 1814.

Shrubs, up to 2.5 m tall; cladodes 16-24 x 8-13 cm, obovate-oblongate, dark green. Leaves minute, succulent, caducous; spines up to 2.5 cm long, greyish-brown, axillary; bristles in axillary clusters, sharp-pointed. Flowers 4-5 cm across. Berries c. 4 cm across.

Occasionally cultivated in rockeries as an ornamental. Fl. & Fr.: October-March. Tamil: Chappaathi kalli.

AIZOACEAE

1. Ovaries and capsules 3-5-locular	.. ..	<i>Sesuvium</i>
1. Ovaries and capsules 1-2-locular:		
2. Style 1	.. ..	<i>Trianthema</i>
2. Styles 2	.. ..	<i>Zaleya</i>

Sesuvium L.

Sesuvium portulacastrum (L.) L. Syst. Nat. ed.10. 1058. 1759; Wood 262; FBI 2:659; FPM 388; Mayur. 137; Backer in Steenis, Fl. Males.ser. 1.4:272. 1951; FTN 1:176. *Portulaca portulacastrum* L.Sp.Pl. 446. 1753.

Prostrate succulent herbs, pink-tinged, rooting at nodes. Leaves 2-4 x 0.3-1 cm, spatulate or oblongate. Flowers c. 9 mm across, pinkish, axillary, solitary. Capsules c. 4 mm across.

A weed around salt pans near backwaters, Ennur; rare. Fl. & Fr.: December-April.

Trianthema L.

Stamens 5	.. ..	<i>T. triquetra</i>
Stamens 10-15	.. ..	<i>T. portulacastrum</i>

Trianthema portulacastrum L. Sp.Pl.223. 1753; FPM 389; Mayur. 138; Backer in Steenis, Fl. Males.ser. 1.4:274. 1951; FTN 1:177. *T. monogyna* L. Mant. Pl. 69. 1767; FBI 2:660.

Prostrate herbs. Leaves 1.5-4.5 x 1.2-4 cm, obovate to suborbicular or broadly elliptic, semisucculent, apex obtuse to retuse. Flowers c. 7 mm across, white or pale pink, axillary. Capsules c. 4 mm across.

A weed of roadsides, railway tracks and other waste places; common. Fl. & Fr.: throughout the year.

Trianthema triquetra Rottl. ex Willd. in Ges. Naturf. Freunde Berlin Neue Schriften 4:181. 1803; FPM 389; Mayur. 138; Backer 273; FTN 1:177. *T. crystallina* auct. non Vahl 1790; FBI 2:660.

Prostrate succulent herbs. Leaves 2-6 x 0.7-3 mm, elliptic to obovate. Flowers c. 2.5 mm across, greenish, axillary. Capsules c. 2 mm across.

A weed of roadsides, railway tracks and other waste places; rare. Fl. & Fr.: April-August.

Zaleya Burm. f.

Zaleya decandra (L.) Burm.f. Fl. Ind. 110.t.31. 1768; FTN 1: Addenda page 2. *Trianthema decandra* L. Mant. Pl. 70. 1767; Brown 75; FBI 2:661; FPM 389; Mayur. 138; Backer 274; FTN 1:176.

Prostrate herbs. Leaves 1.5-3.5 x 1-2.5 cm, elliptic, margin undulate. Flowers c. 6 mm across, pale pink, in axillary fascicles; stamens c. 15. Capsules c. 4 mm across, obconic.

A weed of roadsides and railway tracks; rare. Fl. & Fr.: October-April.

MOLLUGINACEAE

- | | | |
|---|---------|----------------|
| 1. Pistils apocarpous | .. .. . | <i>Gisekia</i> |
| 1. Pistils syncarpous: | | |
| 2. Flowers always in axillary fascicles | .. .. . | <i>Glinus</i> |
| 2. Flowers not as above | .. .. . | <i>Mollugo</i> |

Gisekia L.

Gisekia pharnaceoides L. Mant. Alt. 562. 1771; FBI 2:664; FPM 391; Mayur. 140; Jeffery in Kew Bull. 14:235. 1960; FTN 1:177.

Prostrate herbs. Leaves 5-12 x 4-8 mm, obovate to elliptic, glaucous beneath. Flowers c. 3 mm across, in terminal or leaf-opposed fascicles. Fruiting carpels 5 black.

A weed of sandy places, especially seashores; fairly common. Fl. & Fr.: August-April. Tamil: Manal keera.

Glinus L.

- | | | |
|-------------------------------|---------|--------------------------|
| Leaves densely stellate-hairy | .. .. . | <i>G. lotoides</i> |
| Leaves glabrescent | .. .. . | <i>G. oppositifolius</i> |

Glinus lotoides L.

Leaves densely stellate-hairy	.. .. .	<i>G. lotoides</i>
Leaves glabrescent	.. .. .	<i>G. oppositifolius</i>

Glinus lotoides L. Sp.Pl. 463. 1753; Backer in Steenis, Fl.Males. ser. 1.4:269. 1951. *Mollugo lotoides* (L.) Kuntze, Rev. Gen.Pl. 214. 1891; FPM 390. *M. hirta* Thunb. Prodr. Fl. Cap.24. 1794; FBI 2:662.

Prostrate herbs. Leaves 1-2.5 x 0.6-2 cm, obovate to suborbicular or spatulate. Flowers c. 9 mm across, greenish-white, subsessile. Capsules c. 5 mm long, oblong; seeds tubercled.

A weed of drying lakes and ditches; rare. Fl. & Fr.: April-August.

Glinus oppositifolius (L.) DC. in Bull. Herb. Boissier ser. 2.1:552. 1901; Backer 270; FTN 1:177. *Mollugo oppositifolia* L. Sp.Pl. 89. 1753; FPM 390; Mayur. 139. *M. spargula* L. Syst. Nat. ed. 10.881. 1759; FBI 2:662.

Prostrate herbs. Leaves 5-20 x 2-4 mm, linear to narrowly elliptic. Flowers c. 8 mm across, white. Capsules c. 3 mm across.

A weed of roadsides, railway tracks and other waste places; common. Fl. & Fr.: throughout the year.

Mollugo L.

1. Leaves all radical	.. .. .	<i>M. nudicaulis</i>
1. Leaves radical and cauline:		
2. Leaves linear-filiform	.. .. .	<i>M. cerviana</i>
2. Leaves other than linear-filiform:		
3. Young shoots glandular-pubescent	.. .. .	<i>M. disticha</i>
3. Young shoots glabrous	.. .. .	<i>M. pentaphylla</i>

Mollugo cerviana (L.) Ser. in DC. Prodr. 1:392. 1824; Wood 250; FBI 2:663; FPM 390; Mayur. 140; Baker in Steenis, Fl. Males.ser.1.4:268. 1951; FTN 1:177. *Pharnaceum cerviana* L. Sp.Pl. 272. 1753.

Suberect herbs; stems filiform, often reddish. Leaves 3-15 x 0.5-2 mm, falsely whorled. Flowers c. 3.5 mm across, in leaf-opposed cymes. Capsules c. 3 mm across.

A weed of sandy places, especially seashore, also along railway tracks; fairly common. Fl. & Fr.: throughout the year.

Mollugo disticha (L.) ser. in DC. Prodr. 1:392. 1824; FBI 2:663; FPM 390; Mayur. 139; FTN 1:177. *Pharnaceum distichum* (L.) Mant. Alt. 221. 1771.

Prostrate or suberect herbs. Leaves variable; the radical up to 8 x 1 cm, oblanceate or spatulate; the cauline 1-5 x 0.5-1 cm, elliptic-oblong or elliptic. Flowers c. 8 mm across, greenish-white, in leaf-opposed cymes. Capsules c. 2 mm across.

A weed of sandy places, especially seashores; common. Fl. & Fr.: throughout the year.

Mollugo nudicaulis Lam. Encycl. 4:234. 1797; Wood 250; FBI 2:664; FPM 390; Mayur. 139; FTN 1:177.

Suberect herbs, up to 17 cm tall. Leaves 2-5 x 0.8-1.5 cm, spatulate or obovate, glabrous. Cymes trichasial at first, becoming dichasial later and finally monochasial. Flowers c. 8 mm across, white. Capsules c. 3 mm across.

A weed of roadsides and waste places; common. Fl. & Fr.: August-December.

Mollugo pentaphylla L. Sp.Pl. 89. 1753; Brown 12; FPM 390; Mayur. 139; Backer 268; FTN 1:177. *M. stricta* auct. non L. 1762; FBI 2:663 p.p.

Suberect herbs. Leaves 1-3 x 0.5-0.8 cm, oblanceate or oblanceate-elliptic. Flowers c. 5 mm across, white, in leaf-opposed cymes; stamens 3; styles 3. Capsules 3-valved.

A weed of roadsides and waste places, also along borders of scrub jungles; common. Fl. & Fr.: July-February. Tamil: Parpaatam.

APIACEAE

(Umbelliferae)

1. Leaves simple	.. .. .	<i>Centella</i>
1. Leaves compound :		
2. Flowers whitish	.. .. .	<i>Coriandrum</i>
2. Flowers yellowish	.. .. .	<i>Foeniculum</i>

Centella L.

Centella asiatica (L.) Urb. in Mart.Fl.Bras. 11:287.t. 78.f.1.1879; FPM 392; Mayur. 140; Buwalda in Steenis, Fl. Males. ser. 1.4:177. 1949; Hiroe, Umbellif. World 181. 1979; Krahulik & Theobald in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:484. 1981; FTN 1:179. *Hydrocotyle asiatica* L. Sp.Pl.234. 1753; Brown 79; FBI 2:669.

Prostrate herbs, rooting at nodes. Leaves 3-6 x 3.5-7 cm, reniform, long-petioled, margin crenate to entire. Heads c. 3 mm across; petals red. Fruits c. 3 mm across, suborbicular.

A weed of moist shady places, especially in *Casuarina* plantations; rare. Fl. & Fr.: November-March.

Leaves used as greens. Tamil: Vallarai.

Coriandrum L.

Coriandrum sativum L. Sp.Pl.256. 1753; Brown 79; FBI 2:717; FPM 399; Buwalda in Steenis, Fl.Males.ser. 1.4:128. 1949; Hiroe, Umbellif.World 1098. 1979; Krahulik & Theobald in Dassan. & Fosb.Rev.Handb.Fl.Ceylon 3:489. 1981.

Herbs, upto 30 cm tall. Basal leaves 3-foliolate; leaflets 1-2.5 x 0.8-2 cm, ovate to flabelliform. Upper leaves biternately decompound, with filiform segments. Flowers 1-3 mm across, in compound umbels. Fruits c. 5 x 3 mm.

Commonly cultivated around houses and in fields. Fl. & Fr.: August-March.

Young shoots used as salad. Dried fruits used as a spice in culinary preparations. Tamil: Kotthamalli, Dhaniya. English: The Coriander.

Foeniculum Mill.

Foeniculum vulgare Mill. Gard.Dict. ed. 8. 1768; FBI 2:695; FPM 399; Mayur. 141; Buwalda in Steenis, Fl.Males. ser. 1.4:136. 1949; Hiroe, Umbeliif.World 717. 1979; FTN 1:179.

Undershrubs, upto 1.5 m tall. Basal leaves upto 45 x 30 cm, the upper gradually smaller, all decompound with filiform segments. Flowers c. 2.5 mm across, in compound umbels. Fruits c. 7 mm long.

Occasionally cultivated around houses and in fields. Fl. & Fr.: November-April.

Dried fruits used as spice in culinary preparations. Tamil: Sombu, Peruncheeraham.

Anethum L.

Anethum graveolens L. Sp.Pl.263. 1753; Buwalda in Steenis, Fl.Males.ser. 1.4:136. 1949; FTN 1:178. *A. sowa* Roxb. ex DC. Prodr. 4:186. 1830; Wood 263; FPM 399; Mayur. 141. *Peucedanum graveolens* (L.) Hiern in Oliver, Fl.Trop.Africa 3:19. 1871; FBI 2:709.

Mayuranathan records this.

ALANGIACEAE

Alangium Lam. (nom.cons.)

Alangium salvifolium (L.f.) Wang. in Engler, Pflanzenr. 41:9. 1910; FPM 404; Mayur. 141; Turrill & Milne-Redh. Fl. Trop.East Africa, Alangiaceae 3. 1958; FTN 1:183. *Grewia salvifolia* L.f. Suppl. Pl. 409. 1781. *Alangium lamarckii* Thw. Enum. Pl. Zeyl. 133. 1859; FBI 2:741.

Shrubs or trees, upto 6 m tall. Leaves 5-11 x 1.5-5 cm, oblong-elliptic. Flowers c. 2.5 cm across, greenish-white, in fascicles; petals 6, each c. 2.4 x 0.2 cm. Berries upto 1.7 x 1 cm, ellipsoid.

In thickets, especially along bunds of lakes, often looking shrubby; fairly common. Fl.: March-April. Fr.: April-June. Tamil: Azhinjil, Avinjil.

RUBIACEAE

- 1. Herbs or undershrubs:
 - 2. Ovules and seeds many in each locule:
 - 3. Fruits softly echinate *Dentella*
 - 3. Fruits not echinate *Hedyotis*
 - 2. Ovules and seeds one in each locule:
 - 4. Fruits over 8 mm long *Hydrophylax*
 - 4. Fruits under 6 mm long:
 - 5. Corolla white *Mitracarpus*
 - 5. Corolla pale pink *Spermacoce*
- 1. Shrubs or trees:
 - 6. Fruits compound *Morinda*
 - 6. Fruits simple:
 - 7. Flowers in globose heads *Mitragyna*
 - 7. Flowers not in globose heads:
 - 8. Ovaries unilocular *Gardenia*
 - 8. Ovaries 2-or more-locular:
 - 9. Ovules many in each locule:
 - 10. Plants armed:
 - 11. Flowers solitary *Catunaregam*
 - 11. Flowers in cymose clusters *Benkara*
 - 10. Plants unarmed *Tarenna*
 - 9. Ovules one in each locule:
 - 12. Ovules pendulous *Canthium*
 - 12. Ovules horizontal:
 - 13. Stigmas bifid:
 - 14. Flowers solitary *Psilanthus*
 - 14. Flowers in dense clusters *Ixora*
 - 13. Stigmas not bifid *Pavetta*

Benkara Adans.

Benkara malabarica (Lam.) Tirvengadam in Taxon 32: 440. 1983. *Randia malabarica* Lam. Encycl. 3:25. 1789; FBI 3:111; FPM 435; Mayur. 146.

Shrubs, upto 4 m tall. Leaves 2-9 x 1-3.5 cm, obovate to elliptic or ovate to suborbicular. Flowers c. 2 cm across, white, in axillary cymes; corolla c. 1.6 cm long, lobes reflexed when mature. Fruits c. 9 mm across.

In scrub jungles; common. Fl.: March-August. Fr.: July-March.

Canthium Lam.

Plants armed	.. ..	<i>C. parviflorum</i>
Plants unarmed	.. ..	<i>C. dicoccum</i>

Canthium dicoccum (Gaertn.) Teijsm. & Binn. Cat.Hort. Bog.113. 1866. *Psydrax dicoccos* Gaertn. Fruct. 1:125. t.26.f.2. 1788. *Plectronia didyma* (Roxb.) Benth. & Hook.f.ex Brandis, For. Fl.276. 1874; FPM 440; Mayur. 147. *Canthium didymum* Roxb. Fl.Ind. 1:535. 1820; FBI 3:132.

Shrubs, up to 6 m tall. Leaves 5-8 x 3.5-6 cm, broadly ovate to elliptic, coriaceous. Flowers c. 5 mm across, cream-coloured, in axillary cymes; styles much exerted. Drupes c. 9 mm across.

In scrub jungles; common. Fl.: April-December. Fr.: throughout the year. Tamil: Irumbarathan.

Leaves often with black patches (fungal infection).

Canthium parviflorum Lam. Encycl. 1:602. 1785; FBI 3:136. *Plectronia parviflora* (Lam.) Bedd. For. Man.Bot. 134. 1872; FPM 441; Mayur. 147.

Deciduous shrubs, up to 4 m tall. Leaves 1.5-5 x 1-3.5 cm, ovate to suborbicular, chartaceous. Flowers c. 5 mm across, cream-coloured, in axillary cymes, usually on defoliate branches; styles slightly exerted. Drupes c. 1 cm across, obconic, becoming yellow and then brownish when ripe.

In scrub jungles and thickets; common. Leaf fall: April-May. New leaves: June-July. Fl.: May-June. Fr.: June-November.

Catunaregam Wolf.

Catunaregam spinosa (Thunb.) Tirvengadam in Bull. Mus. His. Nat.(Paris) ser. 3. 35:13. 1978 & in Taxon 27 (5/6): 515. 1978. *Gardenia spinosa* Thunb. Diss. Gard. 7:16. t.2.f.4. 1780. *Xeromphis spinosa* (Thunb.) Keay in Bull. Jard. Bot. Etat 28:37. 1958. *Randia dumetorum* (Retz.) Poir. in Lam. Encycl. (Suppl.2):829. 1812; FBI 3:110; FPM 434; Mayur. 146. *Gardenia dumetorum* Retz. Obs. Bot. 2:14. 1781.

Shrubs, up to 4 m tall. Leaves 1.5-3.5 x 1-2.5 cm, obovate. Flowers c. 2 cm across. white turning yellowish, axillary; calyx lobes foliaceous. Fruits c. 2.2 cm across, with woody pericarp.

In scrub jungles and thickets; common. Fl.: June-August. Fr.: throughout the year.

Dentella Forst. & Forst.f.

Dentella repens (L.) Forst. Char. Gen.Pl.26. t.13. 1776; FBI 3:42; FPM 416; Mayur. 143; Subram. & Sharma in BBSI 10:386. ff. 1-6. 1968. *Oldenlandia repens* L.Mant.Pl. 40. 1767.

Prostrate herbs, often rooting at nodes. Leaves 4-10 x 2-5 mm, sessile, elliptic or ovate-elliptic, base attenuate, margin ciliate. Flowers c. 4 mm long, pale white, solitary, terminal or axillary. Fruits c. 3 mm across.

A weed along bunds of rice fields and other moist places; fairly common. Fl. & Fr.: throughout the year.

Gardenia Ellis (nom.cons.)

Gardenia latifolia Ait. Hort. Kew. 1:294. 1789; Brown 83; FBI 3:116; FPM 436.

Shrubs or trees, up to 5 m tall. Leaves 10-20 x 6-17 cm, opposite or whorled, broadly elliptic to obovate. Flowers solitary, white, turning yellowish, subsesile. Fruits c. 3.5 cm across.

In scrub jungles, Vandalur; rare. Fl.: March-July. Fr.: June-September.

Often looking shrubby, since cut down by fire-wood cutters.

Gardenia resinifera Roth, Nov. Pl. Sp. 150. 1821. *G. lucida* Roxb. Fl. Ind. 2:553. 1824; FBI 3:115; FPM 436; Mayur. 143.

Mayuranathan records this.

Hedyotis L.

- | | | |
|------------------------------------|-------|------------------------|
| 1. Capsules 4-winged. | .. .. | <i>H. pterita</i> |
| 1. Capsules not 4-winged: | | |
| 2. Capsules 4-angled | .. .. | <i>H. biflora</i> |
| 2. Capsules not 4-angled: | | |
| 3. Flowers sessile or subsessile: | | |
| 4. Peduncles 1-3-flowered: | | |
| 5. Leaves scabrous | .. .. | <i>H. caerulea</i> |
| 5. Leaves not Scabrous | .. .. | <i>H. diffusa</i> |
| 4. Peduncles 4-or more-flowered | .. .. | <i>H. puberula</i> |
| 3. Flowers distinctly pedicellate: | | |
| 6. Leaves scaberulent | .. .. | <i>H. corymbosa</i> |
| 6. Leaves glabrous: | | |
| 7. Flowers solitary | .. .. | <i>H. herbacea</i> |
| 7. Flowers not solitary: | | |
| 8. Corolla over 5 mm long | .. .. | <i>H. graminifolia</i> |
| 8. Corolla under 4 mm long | .. .. | <i>H. brachiata</i> |

Hedyotis biflora (L.) Lam. Tabl. Encycl. 1:272. 1792. *Oldenlandia biflora* L. Sp.P1. 119. 1753; FBI 3:70; FPM 425; Mayur. 144. *Thecagonum biflorum* (L.) Babu in Bull. Bot. Surv. India 11:214. 1971. *Oldenlandia paniculata* L. Sp.P1. ed. 2. 1667. 1763 p.p.; FBI 3:69.

Prostrate or suberect herbs, up to 20 cm tall. Leaves 1-6 x 0.5-3 cm, oblong to ovate-elliptic, semisucculent. Flowers c. 3 mm across, white, in axillary cymes. Fruits c. 5 x 4 mm.

A weed of waste places; rare. Fl. & Fr.: throughout the year.

Hedyotis brachiata Wight in Wight & Arn. Prodr. 416. 1834. *Oldenlandia brachiata* (Wight) Hook.f. in Hook.f. Fl. Brit. India 3:66. 1880. *O. pusilla* Rottl. in Ges. Naturf. Freunde Berlin Neue Schriften 4:216. 1803 non *Hedyotis pusilla* Hochst. ex A.Rich. 1847; FPM 424.

Herbs, up to 10 cm tall. Leaves 10-30 x 1.5-2.5 mm, linear to subulate. Flowers c. 2 mm across, pale pink, in lax, terminal and axillary cymes; corolla twice longer than calyx lobes. Capsules c. 2.5 mm across.

A weed of moist grounds near scrub jungles, lakes etc; common. Fl. & Fr.: October-December.

Hedyotis caerulea Wight & Arn. Prodr. 412. 1834; FBI 3:60. *Oldenlandia caerulea* (Wight & Arn.) Gamble in Gamble & Fischer, Fl. Pres. Madras 597. 1921 & 421. 1957 (repr.ed.); Barnes 17.

Erect or suberect, scabrous herbs, up to 15 cm tall; stems wiry, pale red. Leaves 10-30 x 1-2 mm, linear-subulate. Flowers c. 2 mm across, violet, 2-3 together in axillary or terminal heads. Capsules c. 2 mm across.

A weed of moist or marshy places, often near lakes; rare. Fl. & Fr.: January-March.

Hedyotis corymbosa (L.) Lam. Encycl. 1:272. 1792; Rao & Hemadri in Indian Forester 99:357. 1973. *Oldenlandia corymbosa* L. Sp.P1. 119. 1753; FBI 3:64; FPM 423; Mayur 144.

Decumbent herbs, up to 20 cm tall; stems 4-angled, rooting at lower nodes. Leaves 10-30 x 2-4 mm, linear to linear lanceate. Flowers c. 2 mm across, pale pink; corolla tube almost as long as calyx. Capsules c. 3 mm across.

A weed of rice fields and moist places; common. Fl. & Fr.: September-March.

Hedyotis diffusa Willd. Sp.P1. 566. 1798. *Oldenlandia diffusa* (Willd.) Roxb. Fl. Ind. 1:444. 1820; FBI 3:65; FPM 423; Mayur 144.

Prostrate or erect herbs. Leaves 10-30 x 2-4 mm, linear to lanceate. Flowers c. 2 mm across, white. Capsules c. 2 mm across.

A weed along railway tracks and moist, shady places; fairly common. Fl. & Fr.: January-April.

Hedyotis graminifolia L.f. Suppl. P1. 1:119. 1781; Deb & Dutta in Taxon 32:285. 1983. *Oldenlandia stricta* L.Mant. Alt. 200. 1771 non *Hedyotis stricta* Sm. 1811; FBI 3:68; FPM 425; Mayur. 145.

Suberect or erect herbs, up to 40 cm tall; stems 4-angled. Leaves 15-40 x 2-6 mm, linear to lanceate. Flowers c. 4 mm across, in terminal and axillary cymes; corolla funnelform. Capsules c. 3 mm across.

A weed of sandy seashores; rare. Fl. & Fr.: October-April.

Hedyotis herbacea L. Sp.P1. 102. 1753; Rao & Hemadri 376. *Oldenlandia herbacea* (L.) Roxb. Fl. Ind. 1:445. 1820; FPM 424. *Oldenlandia heynii* (Wight & Arn.) Hook.f in Hook.f.Fl. Brit. India 2:65. 1880. *Hedyotis heynii* Wight & Arn. Prodr. 416. 1834.

Herbs, up to 30 cm tall. Leaves 15-30 x 2-3 mm, linear, bright green. Flowers c. 2 mm across, white, axillary or extra-axillary; corolla salverform, tube thrice longer than calyx lobes. Capsules c. 3 mm across.

A weed of roadsides, scrub jungles etc., common. Fl. & Fr.: October-March.

Hedyotis pterita Blume, Bijdr. 972. 1826. *Thecagonum pteritum* (Blume) Babu in Bull. Bot. Surv. India 11:214. 1969. *Oldenlandia alata* auct. non Koen. 1834; FBI 3:70; FPM 425; Mayur. 144.

Herbs, up to 20 cm tall. Leaves 1-3 x 0.5-2 cm, elliptic-lanceate, semisucculent. Flowers c. 4 mm across, white, in axillary cymose heads. Fruits c. 6 x 4 mm.

A weed of waste places; very rare. Fl. & Fr.: throughout the year.

Hedyotis puberula (G.Don) Arn. Pugill. 342. 1836; Deb & Dutta in JBNHS 81:232. 1984. *Oldenlandia puberula* G.Don. Gen.Syst. 3:530. 1834. *O. umbellata* L. Sp.P1. 119. 1753 non *Hedyotis umbellata* Wall. 1788; FBI 3:66; FPM 424; Mayur 145.

Prostrate or erect herbs, up to 20 cm tall. Leaves 10-30 x 2-3 mm, linear, scaberulent. Flowers c. 4.5 mm across, white; corolla campanulate. Capsules c. 2.5 mm across.

A weed of playgrounds, roadsides etc.; common. Fl. & Fr.: throughout the year.

Hedyotis graminifolia L.f. var. *shuteri* (Hook.f.) Deb & Dutta in Taxon 32:285. 1983. *Oldenlandia shuteri* Hook.f. in Hook.f. Fl.Brit. India 3:69. 1880; FPM 425; Mayur. 145.

Mayuranathan records this.

Hedyotis pumila L.f. Suppl. P1. 119. 1781; Rao & Hemadri 377. *Oldenlandia crystallina* Roxb. Fl.Ind. 1:422. 1820; FBI 3:65; FPM 424; Mayur. 144.

Mayuranathan records this.

Hydrophylax L.f.

Hydrophylax maritima L.f. Suppl. P1. 126. 1781; Brown 86; FBI 3:199; FPM 461; Mayur. 148.

Prostrate herbs. Leaves 1-3 x 0.6-1.3 cm, ovate-oblong, succulent, glabrous. Flowers c. 13 mm long, pinkish-purple, solitary, axillary; corolla funnelform. Fruits c. 1.5 cm long.

A weed of sandy seashores; very rare. Fl. & Fr.: September-March.

Ixora L.

Corolla tube under 1.3 cm long
Corolla tube over 2.5 cm long

.. .. . *I. pavetta*
.. .. . *I. coccinea*

Ixora coccinea L. Sp.P1. 110. 1753; Brown 85; FBI 3:145; FPM 445; Mayur. 146; BICS 86.

Shrubs, up to 3 m tall. Leaves 5-10 x 2.5-5 cm, oblong elliptic, coriaceous, base cordate or subcordate. Flowers c. 2.4 cm across, red, pink or yellow, in dense, terminal, corymbose cymes. Fruits c. 8 mm across.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year.

Ixora pavetta Andrews, Bot. Rep. t.78. 1799. *I. parviflora* Vahl, Symb. Bot. 3:11. t.52. 1794 non Lam. 1791; Brown 85; FBI 3:142; FPM 445; Mayur. 146; BICS 87.

Shrubs or trees, up to 6 m tall. Leaves 7-14 x 3-5 cm, oblong-elliptic, coriaceous. Flowers c. 7 mm across, white, in dense, terminal, corymbose cymes. Fruits c. 8 mm across, turning pinkish at first and finally purplish-black when ripe.

In scrub jungles; common. Flowers bloom in the evening, very sweet-scented. Fl.: February-April. Fr.: March-July.

Mitracarpus Zucc.

Mitracarpus villosus (Sw.) DC. Prodr. 4:572. 1830; Verdc. in Kew Bull. 30:317-322. 1975; FTN 2:14.

Herbs, up to 25 cm tall. Leaves 2-4 x 1-2 cm, ovate-elliptic, pubescent. Flowers c. 2 mm across, white, in dense axillary clusters. Capsules c. 2 mm across, circumscissile.

A weed of waste places, fairly common. Fl. & Fr.: July-March. Native of the West Indies.

Mitragyna Korth (nom.cons.)

Mitragyna parvifolia (Roxb.) Korth. Observ. Nacl. Indic. 19. 1839; FPM 413; Ridsd. in Blumea 24:63. 1978. *Nauclea parvifolia* Roxb. Pl. Cor. t. 52. 1796. *Stephegyne parvifolia* (Roxb.) Korth. Verh. Nat. Gesch. Ned. Bezitt. Bot. 161. 1842; FBI 3:25.

Trees, up to 12 m tall. Leaves 5-12 x 2-6 cm, oblong — lanceate or ovate to suborbicular. Heads c. 2 cm across, pale white. Flowers c. 1 cm long. Fruits c. 3 mm across.

Occasionally cultivated along roadsides and parks. Fl.: March-July. Fr.: June-August. Tamil Neerkkadambai.

Morinda L.

Morinda pubescens Smith in Rees, Cyclop. 24. n.3. 1813; Verdc. in Kew Bull. 37: 543. 1983. *M. tinctoria* Roxb. Fl. Ind. 2:197. 1824 non Noronha 1790; Brown 84; FBI 3:156; FPM 459.

Shrubs or trees, up to 8 m tall. Leaves 6-13 x 1.5-4 cm, elliptic or lanceate to linear, glabrous to tomentose; stipules variable in size, acute to emarginate at apex. Flowers c. 1.7 cm across, white, sessile, in heads; ovaries coherent together. Fruits c. 2.5 cm across, black when ripe.

In scrub jungles, thickets and waste places; common. Fl. May-September. Fr.: throughout the year. Tamil: Nuna.

Pavetta L.

Pavetta indica L. Sp.Pl.110. 1753; Brown 85; FBI 3:150; FPM 446; Mayur. 147.

Shrubs, up to 2 m tall. Leaves 6-14 x 2-4 cm, lanceate — elliptic to obovate - elliptic, glabrous. Flowers c. 1.2 cm across, white, in terminal corymbose cymes. Fruits c. 7 mm across.

In thickets, also cultivated in gardens; rare. Fl.: July-September. Fr.: August-December.

Psilanthus Hook.f. (*nom.con.*)

Psilanthus wightianus (Wight & Arn.) Leroy in Adansonia, 3:252. 1981. *Coffea wightiana* Wight & Arn. Prodr. 436. 1834; FBI 3:154; FPM 449; Barnes 18.

Deciduous shrubs, up to 2 m tall; branchlets often become subthorny. Leaves 1-4 x 0.8-3 cm, ovate to ovate elliptic. Flowers c. 2 cm across, white, sweet-scented, solitary, terminal on short branchlets. Fruits c. 1 cm across, purplish-black when ripe.

In scrub jungles; common. Fl.: April-June. Fr.: May-August.

Spermacoce L.

Corolla salverform	.. .. .	<i>S. articularis</i>
Corolla funnelform or campanulate	.. .. .	<i>S. hispida</i>

Spermacoce articularis L.f. Suppl. Pl. 119. 1781; Sivar. & Nair in Taxon 35:366.1986. *Borreria hispida* auct. non (L., Schum. 1891; FPM 654. *Spermacoce hispida* auct. non L. 1753; FTN 2:24 p.p.

Prostrate herbs; stems 4-angled, up to 50 cm long. Leaves 1.5-4.5 x 1-2.5 cm, oblong-elliptic, scabrous. Flowers c. 4 mm across, pinkish-purple, in axillary fascicles; corolla up to 1.2 cm long, 4-lobed. Capsules c. 3 mm across.

A weed of roadsides and other waste places; common. Fl. & Fr.: July-March.

Spermacoce hispida L. Sp.Pl. 102.1753; Sivar. & Nair 366; FTN 2:24 p.p. *Borreria hispida* (L.) Schum. in Engler & Prantl, Pflanz. 4(4):144.1891, non Spruce ex Schum. 1888; FPM 654 p.p.

Prostrate herbs; stems 4-angled, up to 1 m long. Leaves 2-4 x 1. 2-3 cm, oblong-orbicular or oblong-elliptic, hispid. Flowers c. 5 mm across, purplish-pink, in axillary fascicles; corolla up to 8 mm long. Capsules c. 3 mm across.

A weed of sandy seashore; common. Fl. & Fr.: August-February.

Tarenna Gaertn.

Tarenna asiatica (L.) Kuntze ex Schum. Bot. Tidsskr. 24:332. 1992. *Rondeletia asiatica* L.Sp.Pl. 172. 1753. *Chomelia asiatica* (L.) Kuntze, Rev. Gen. Pl. 1:278. 1891; FPM 432; Mayur. 145; *Webera corymbosa* Willd. Sp.Pl. 1:1224. 1798; FBI 3:102.

Shrubs, up to 4 m tall. Leaves 8-16 x 2-5 cm, oblanceate — elliptic, shiny, dark green. Flowers c. 1.3 cm across, white, in terminal corymbose cymes. Fruits c. 8 mm across.

In scrub jungles; very common. Fl.: April-August. Fr.: throughout the year.

Tamilnadia Tirvengadam & Sastre

Tamilnadia uliginosa (Retz.) Tirvengadam & Sastre in Mauritius Inst. Bull. 8(4):85. 1979. *Gardenia uliginosa* Retz. Obs. Bot. 2:14. 1781. *Randia uliginosa* (Retz.) DC. Prodr. 4:386. 1830; FPM 434; Barnes 17.

Barnes records this.

ASTERACEAE (COMPOSITAE)

- | | | |
|---|---------|-----------------------|
| 1. Stems spreading as runners | .. .. . | <i>Launaea</i> p.p. |
| 1. Stems not as above: | | |
| 2. Involucral bracts spine-tipped | .. .. . | <i>Dicoma</i> |
| 2. Involucral bracts not spine-tipped: | | |
| 3. Achenes covered by sheaths, with 2 or more spines: | | |
| 4. Lower leaves alternate | .. .. . | <i>Xanthium</i> |
| 4. Lower leaves opposite | ..... | <i>Acanthospermum</i> |
| 3. Achenes not as above: | | |
| 5. Leaves compound or much dissected: | | |
| 6. Heads over 2.5 cm across | .. .. . | <i>Tagetes</i> |
| 6. Heads under 2 cm across: | | |
| 7. Ray florets 5 per head, white | .. .. . | <i>Parthenium</i> |
| 7. Ray florets not 5 per head, yellow: | | |
| 8. Leaves all radical | .. .. . | <i>Glossocardia</i> |
| 8. Leaves radical and cauline | .. .. . | <i>Glossogyne</i> |
| 5. Leaves not as above: | | |
| 9. Lower leaves alternate: | | |
| 10. Heads with ray florets: | | |
| 11. Leaves runcinate, laticiferous | .. .. . | <i>Launaea</i> p.p |
| 11. Leaves not as above: | | |
| 12. Heads under 7 cm across: | | |
| 13. Leaves pinnately lobed | .. .. . | <i>Chrysanthemum</i> |
| 13. Leaves not lobed | .. .. . | <i>Vicoa</i> |
| 12. Heads over 10 cm across | .. .. . | <i>Helianthus</i> |
| 10. Heads without ray florets: | | |
| 14. Heads homogamous: | | |
| 15. Lower leaves pinnately lobed | .. .. . | <i>Emilia</i> |
| 15. Lower leaves not lobed | .... | <i>Vernonia</i> |
| 14. Heads heterogamous: | | |
| 16. Upper leaves pinnately lobed | .. .. . | <i>Grangea</i> |
| 16. Upper leaves not pinnately lobed: | | |

- 17. Plants white-woolly *Gnaphalium*
- 17. Plants not white-woolly:
 - 18. Receptacles convex *Sphaeranthus*
 - 18. Receptacles not convex:
 - 19. Pappus present *Blumea*
 - 19. Pappus absent *Epaltes*
- 9. Lower leaves opposite:
 - 20. Each flower surrounded by a separate involucre *Lagascea*
 - 20. Each flower not surrounded by a separate involucre:
 - 21. Heads with ray florets:
 - 22. Leaves sharply toothed or lobed *Tridax*
 - 22. Leaves entire:
 - 23. Heads under 1.5 cm across:
 - 24. Florets white:
 - 25. Stems erect, over 1 m tall *Blainvillea*
 - 25. Stems prostrate or suberect, under 60 cm long *Eclipta*
 - 24. Florets yellow *Synedrella*
 - 23. Heads over 3 cm across *Zinnia*
 - 21. Heads without ray florets:
 - 26. Upper leaves alternate *Ageratum*
 - 26. Upper leaves opposite *Chromolaena*

Acanthospermum Schrank

Acanthospermum hispidum DC. Prodr. 5:522. 1836; FPM 495; Mayur. 151; Kosterm. in Blumea 25:254. 1979; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:206. 1980.

Herbs, up to 50 cm tall. Leaves 2-6 x 1-3 cm, elliptic or obovate-oblongate, pilose, base attenuate. Heads c. 5 mm across, rayed; flowers pale yellow. Achenes c. 5 mm long.

A weed of waste places; fairly common. Fl. & Fr.: December-June. Native of South America.

Ageratum L.

Ageratum conyzoides L. Sp.Pl. 839. 1753; Clarke, Comp. Ind. 30. 1876; FBi 3:243; FPM 476; Mayur. 157; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:141. 1980.

Aromatic herbs, up to 60 cm tall. Leaves 2-7 x 1-5 cm, ovate to ovate-elliptic, crenate to subentire, hirsute. Heads c. 5 mm across, in terminal corymbs; flowers white to purplish. Achenes c. 1.5 mm long.

A weed of roadsides and other waste places; common. Fl. & Fr.: throughout the year.

Blainvillea Cass.

Blainvillea acmella (L.) Philipson in Blumea 6:350. 1950; Grierson in Dassan. & Fosb. 1:213. 1980. *Verbesina acmella* L. Sp.Pl. 901. 1753. *Blainvillea latifolia* (L.f.) DC. in Wight, Contrib. 17. 1834; Clarke, Comp. Ind. 135. 1876; FBI 3:305. *Eclipta latifolia* L.f. Suppl. Pl. 378. 1781.

Blainvillea rhomboidea Cass. in Cavier, Dict. Sci. Nat. 29:494. 1823; FPM 496.

Undershrubs, up to 1.5 m tall. Leaves 4-10 x 2-6 cm, ovate, scabrous, serrate-dentate, apex acuminate. Heads c. 5 mm across, rayed, solitary, terminal or axillary; flowers c. 5 mm long. Achenes c. 4 mm long, truncate at apex.

A weed of waste places; rare. Fl. & Fr.: October-March.

Blumea DC. (*nom. cons.*)

1. Heads 1 or 2 on a peduncle:

2. Achenes angled; pappus white

.. .. . *B. bifoliata*

2. Achenes not angled; pappus pink

.. .. . *B. obliqua*

1. Heads 3 or more on a peduncle:

3. Leaves decurrent at base

.. .. . *B. aurita*

3. Leaves not decurrent at base

.. .. . *B. mollis*

Blumea aurita (L.f.) DC. in Wight, Contrib. 16. 1834; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:168. 1980. *Conyza aurita* L.f. Suppl. Pl. 367. 1781. *Laggera aurita* (L.f.) Benth. ex Clarke, Comp. Ind. 92. 1876; FBI 3:271; FPM 485; Mayur. 156.

Aromatic, villous herbs, up to 70 cm tall. Leaves 1-10 x 0.4-3 cm; lower leaves larger, pinnatifid and the upper ones gradually smaller, obovate or oblong, dentate. Heads c. 8 mm long, in terminal corymbs; flowers pale purple; outer flowers pistillate and inner ones bisexual. Achenes c. 2 mm long.

A weed of waste places; common. Fl. & Fr.: February-May.

Blumea bifoliata (L.) DC. in Wight, Contrib. 14. 1834; Clarke 72; FBI 3:261; FPM 482; Mayur. 155; Randeria in Blumea 10:288. 1960; Grierson 176. *Conyza bifoliata* L. Sp.Pl. 862. 1753.

Decumbent herbs, up to 25 cm tall. Leaves 2-6 x 0.8-2 cm; lower leaves oblanceolate, attenuate at base, dentate and upper ones ovate-elliptic, semiamplexicaule at base, entire or denticulate. Heads c. 4 mm across, solitary, on axillary peduncles; flowers yellow. Achenes c. 2 mm long.

A weed of rice fields and other moist places; common. Fl. & Fr.: October-April.

Blumea mollis (D.Don) Merr. Philipp. J. Sci. 5:395. 1910; Randeria 261; Grierson 169. *Erigeron molle* D.Don, Prodr. Fl. Nepal. 172. 1825. *Blumea wightiana* DC. in Wight, Contrib. 14. 1834; Clarke 74; FBI 3:261; FPM 483; Mayur. 155.

Aromatic, villous herbs, up to 50 cm tall. Leaves 3-12 x 1-4 cm, radical and cauline, oblanceolate-elliptic, bidentate. Heads c. 6 mm across, in terminal corymbs; flowers pinkish-purple; outer flowers pistillate and inner ones bisexual. Achenes c. 1 mm long.

A weed of waysides and waste places; common. Fl. & Fr.: February-May.

Blumea obliqua (L.) Druce in Bot. Soc. Exch. Club. Brit. Isles 4:609. 1910; Randeria 286; Grierson 174. *Erigeron obliquum* L. Mant. Alt. 573. 1771. *Blumea amplexans* DC. in Wight, Contrib. 13. 1834; FBI 3:260; FPM 482; Mayur. 155.

Herbs, up to 50 cm tall. Leaves 1-6 x 0.3-2.5 cm; lower leaves oblong-lanceate or oblanceate-spatulate, base attenuate; upper leaves ovate-oblong, base obtuse or cordate. Heads c. 5 mm across, 1 or 2, on axillary peduncles; flowers purplish. Achenes c. 1 mm long.

A weed of moist and marshy places; rare. Fl. & Fr.: November-April.

Chromolaena DC.

Chromolaena odorata (L.) King & Robinson in Phytologia 20:204. 1970. *Eupatorium odoratum* L. Syst. Nat. ed. 10.1205. 1759; FBI 3:244; Mayur. 157; Kosterm. in Blumea 25:249. 1979.

Aromatic shrubs or undershrubs, up to 2 m tall. Leaves 4-10 x 2-6 cm, deltoid-ovate, tomentose, apex acuminate. Heads c. 1.3 cm long, cylindrical, in terminal corymbs; flowers pale violet to pale white. Achenes 4-5 — angled.

A weed of waste places, Tambaram, very rare. Fl. & Fr.: December-April. Native of Tropical America.

Chrysanthemum L.

Chrysanthemum indicum L. Sp.Pl. 889. 1753; Mayur. 159.

Spreading herbs or undershrubs, rooting at lower nodes. Leaves 4-8 x 3-6 cm, ovate, lobes serrate or biserrate. Heads up to 6 cm across, at the ends of branches; flowers white to yellow or pinkish to purplish.

Commonly cultivated in gardens as an ornamental. Fl.: November-March. Tamil: Saamanthi. Native of China and Japan.

Dicoma Cass.

Dicoma tomentosa Cass. in Bull. Sci. Soc. Philom. (Paris) 12. 1818; Clarke, Comp. Ind. 245. 1876; FBI 3:387; FPM 512; Mayur. 151.

Herbs, up to 40 cm tall. Leaves 2-5 x 0.5-2 cm, linear or linear-obovate, white-tomentose. Heads c. 1 cm across, at the ends of branches; flowers pale white. Achenes c. 3 mm long, turbinate, sericeous.

A weed of barren lands; very rare. Fl. & Fr.: January-April.

Eclipta L. (nom. cons.)

Eclipta prostrata (L.) L. Mant. Alt. 286. 1771; Kosterm. in Blumea 25:273. 1979. *Verbesina prostrata* L. Sp.Pl. 902. 1753. *Eclipta alba* (L.) Hassk. Pl. Jav. Rar. 528. 1848; FBI 3:304; FPM 496; Mayur. 156. *Verbesina alba* L. Sp.Pl. 902. 1753.

Prostrate or suberect herbs, up to 40 cm tall. Leaves 1-5 x 0.5-2 cm, linear to elliptic, scaberulent, entire to obscurely serrate. Heads c. 5 mm across; flowers white. Achenes c. 3.5 mm long.

A weed of rice fields and moist places; common. Fl. & Fr.: throughout the year.

Stems and leaves ground into a paste, mixed with butter milk and consumed for jaundice.
Tamil: Karisalaankanni.

Emilia Cass.

Emilia sonshifolia (L.) DC. in Wight, Contrib, 24. 1834; FBI 3:336; FPM 503; Mayur. 159; Kosterm in Blumea 26:238. 1980. *Cacalia sonschifolia* L. Sp. Pl. 835. 1753.

Herbs, up to 60 cm tall. Leaves 4-9 x 1.5-4 cm; lower leaves lyrate with attenuate base and the upper ones lanceate, amplexicaule at base. Heads c. 12 x 4 mm, dilated at base, terminal on branched peduncles; flowers c. 1 mm long. Achenes c. 3 mm long, grooved.

A weed of shady places; common. Fl. & Fr.: August-January.

Epaltes Cass.

Achenes ribbed	.. .. .	<i>E. divaricata</i>
Achenes not ribbed	.. .. .	<i>E. pygmaea</i>

Epaltes divaricata (L.) Cass. in Bull. Sci.Soc.Philom. (Paris) 139. 1818; Clarke, Comp.Ind. 96. 1876; FBI 3:274; FPM 486; Grierson in Dassan. & Fosb. Rev. Handb. Fl.Ceylon 1:178. 1980. *Ethulia divaricata* L. Mant. Pl. 110. 1767.

Herbs, up to 25 cm tall; stems 3-4 — winged. Leaves 1-4 x 0.3 - 1 cm, oblanceate-spatulate or linear. Heads c. 5 mm across; flowers purplish. Achenes c. 1 mm long.

A weed of rice fields and other moist places; fairly common. Fl. & Fr.: November-April.

Epaltes pygmaea DC. Prodr. 5:461. 1836; FBI 3:274; FPM 486; Barnes 19; Grierson 179.

Herbs, up to 20 cm tall; stems 4-winged. Leaves 1-4 x 0.2-0.5 cm, linear-elliptic or oblanceate, entire or denticulate. Heads c. 5 mm across; flowers pale purple. Achenes c. 0.5mm long.

A weed of rice fields and other moist places; fairly common. Fl. & Fr.: November-April.

Glossocardia Cass.

Glossocardia bosvallea (L.f.) DC. in Wight, Contrib. 19. 1834; Clarke, Comp. Ind. 139. 1876; FPM 499. *Verbesina bosvallea* L.f. Suppl. Pl. 379. 1781. *Glossocardia linearifolia* Cass. in Cavier, Dict. Sci. Nat. 19:62. 1821; FBI 3:308.

Prostrate or suberect herbs. Leaves 1-5 x 0.6-3 cm, glabrous, aromatic when crushed; lobes filiform. Heads c. 8mm long, short-peduncled; inner involucre bracts larger. Achenes c. 6mm long.

A weed of dry, barren lands, often along rocky places; rare. Fl. & Fr.: January-April.

Glossogyne Cass.

Glossogyne bidens (Retz). Alston in Trimen, Handb. Fl. Ceylon 6 (Suppl.):168. 1931; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:230. 1980. *Zinnia bidens* Retz. Obs. Bot. 5:28. 1788. *Glossogyne pinnatifida* DC. in Wight, Contrib. 19. 1834; FBI 3:310; FPM 499.

Herbs, with a thick rootstock, up to 35 cm tall, aromatic when crushed. Leaves mostly basal, 3-8 x 1-3 cm, lobes linear. Heads usually solitary on branch apices. Flowers yellow. Achenes 2-awned at apex, awns retrorsely barbed.

A weed of playgrounds, often amidst grasses, Tambaram; rare. Fl. & Fr.: June-August.

Gnaphalium L.

Gnaphalium polycaulon Pers. Syn. Pl. 2:421. 1807; Grierson in Notes Roy. Bot. Gard. Edinburgh 31:137. 1972. *G. indicum* auct. non L. 1753; FBI 3:289; FPM 491; Barnes 19.

Herbs, up to 12 cm tall; stems white-woolly. Leaves 1-3 x 0.4-1 cm, linear-spatulate, woolly. Heads c. 3 mm long, sessile or subsessile on terminal peduncles; flowers pale yellow; outer flowers pistillate and inner ones bisexual. Achenes minute, with white scales.

A weed of drying ditches and ponds; rare. Fl. & Fr. January-March.

Grangea Adans.

Grangea maderaspatana (L.) Poir. in Lam. Encycl. (Suppl.) 2:825. 1812; Brown 88; FBI 3:247; FPM 478; Mayur. 154; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:150. 1980. *Artemisia maderaspatana* L. Sp. Pl. 849. 1753.

Prostrate or erect herbs, up to 20 cm tall. Leaves 2-4 x 1-2.5 cm, pinnatifid or bipinnatifid, pubescent. Heads solitary or 2-4 together, terminal or axillary; flowers yellow. Achenes greenish.

A weed of moist places, drying ditches and lakes; rare. Fl. & Fr.: January-April.

Helianthus L.

Helianthus annuus L. Sp. Pl. 904. 1753; Brown 89; Clarke, Comp. Ind. 139. 1876; Mayur. 159.

Herbs, up to 1.2 m tall. Leaves 10-20 x 6-12 cm, ovate, densely pubescent. Heads 10-15 cm across, solitary, terminal; flowers yellow. Achenes c. 10 x 8 mm.

Commonly cultivated in gardens and fields. Fl. & Fr.: October-April.

Seeds yield edible oil used as cooking medium. Tamil: Sooriya kaanthi. English: The sunflower. Native of America.

Lagascea Cav.

Lagascea mollis Cav. in Anales Ci. Nat. 6:33. t. 44. 1803; FBI 3:302; FPM 494; Mayur. 157; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:204. 1980.

Spreading or erect herbs, up to 50 cm tall. Leaves 2-5 x 1-2.5 cm, elliptic-lanceate or ovate, pubescent, distantly and obscurely serrate, base attenuate. Glomerules c. 1.5 cm across; involucre of each floret 5-lobed; flowers c. 5 mm long, white with purple-tinge. Achenes c. 3 mm long.

A weed of cultivated fields and waste places; fairly common. Fl. & Fr.: throughout the year. Native of Central America.

Launaea Cass.

Stems erect; pappus heterogeneous	.. .. .	<i>L. intybacea</i>
Stems prostrate; pappus homogeneous	.. .. .	<i>L. sarmentosa</i>

Launaea intybacea (Jacq.) Beauv. in Bull.Soc.Bot.Geneve ser. 2.2:114. 1910; Jeffrey in Kew Bull. 18:472. 1966; Grierson in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 1:277. 1980. *Lactuca intybacea* Jacq. Ic.P1. Rar. 1:16. t.12. 1784. *Lactuca runcinata* DC. in Wight, Contrib. 26. 1834; FPM 514; Mayur. 150. *L. heyneana* DC. Prodr. 7:140. 1838; FBI 3:403.

Herbs, up to 1 m tall. Leaves radical and cauline, 3-15 x 0.5-5 cm; upper leaves gradually smaller, runcinate or pinnatifid. Heads c. 1 cm long, many rayed, on long leafless branches; flowers creamy-white. Achenes c. 3 mm long, elliptic; pappus white.

A weed of waste places; very rare. Fl. & Fr.: December-April. Tamil. Ezhutthaani poondu.

Launaea sarmentosa (Willd.) Sch.-Bip. ex Kuntze, Rev. Gen. Pl. 1:350. 1891; Grierson 276. *Prenanthes sarmentosa* Willd. Enyogr. 10. t.6. f.2. 1794. *Launaea pinnatifida* Cass. in Ann.Sci.Nat. (Paris) ser. 1. 23:85. 1831; FBI 3:416; FPM 515; Mayur. 151.

Stoloniferous herbs. Leaves 1-8 x 0.3-2 cm, rosulate, oblanceate or spatulate. often pinnatifid denticulate. Heads c. 1.7 cm across, rayed, solitary, on bracteate peduncles; flowers yellow. Achenes c. 5 mm long, black.

A weed of sandy seashores; fairly common. Fl. & Fr.: December-March.

Parthenium L.

Parthenium hysterophorus L. Sp.P1. 988. 1753; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:809. 1983. Plate 16 A-E.

Herbs, up to 1.3 m tall. Leaves 5-25 x 4-20 cm; radical leaves large and the cauline ones gradually smaller; lobes linear. Heads c. 6 mm across, numerous, on branched terminal and axillary peduncles; flowers pale white. Achenes black.

A weed along railway tracks, roadsides and other waste places; common. Fl. & Fr.: throughout the year. Native of tropical America.

Sphaeranthus L.

Sphaeranthus indicus L. Sp.Pl. 927. 1753; FBI 3:275 p.p.; FPM 487; Mayur. 158; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:181. 1980.

Aromatic herbs, up to 40 cm tall; stems 4-winged; wings irregularly toothed. Leaves 1-5 x 0.5-3 cm, spatulate to obovate-oblongate, base attenuate and decurrent. Glomerules c. 1.5 cm across, subglobose, terminal; flowers purplish. Achenes of pistillate flowers c. 1 mm long, of bisexual flowers c. 1.5 mm long.

A weed of rice fields and other marshy places; common. Fl. & Fr.: throughout the year.

Synedrella Gaertn. (nom.cons.)

Synedrella nodiflora (L.) Gaertn. Fruct. 2:456. t.171. f.7. 1791; FBI 3:308; FPM 498; Mayur. 152; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:222. 1980. *Verbesina nodiflora* L. in Torner, Cent. Pl. 1:128. 1755.

Herbs, up to 1 m tall. Leaves 3-8 x 1-5 cm, ovate, appressed-pilose, entire, or obscurely serrate. Heads c. 5 mm across, rayed, sessile or subsessile, terminal or axillary; involucre bracts foliaceous; flowers yellow. Ray-achenes 2-winged.

A weed of waste places; common. Fl. & Fr.: throughout the year. Native of tropical America.

Tagetes L.

Tagetes erecta L. Sp.Pl. 887. 1753; Brown 90; Mayur. 160; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:234. 1980.

Herbs, up to 60 cm tall. Leaves pinnate; leaflets 11-17, each 1-5 x 0.3-1 cm, lanceate, serrate. Heads c. 5 cm across, prominently rayed, solitary on swollen peduncles; flowers yellow. Achenes with 1-2 long, aristate scales.

Commonly cultivated as an ornamental. Fl. & Fr.: October-March. Tamil: Thurukka Saamanthi. English: African Marigold. Native of Mexico.

Tagetes patula L. Sp.Pl. 887. 1753; Brown 90; Mayur. 160.

Mayuranathan records this.

Tamil: Thurukka saamanthi. English: French Marigold. Native of Mexico.

Tridax L.

Tridax procumbense L. Sp.Pl. 900. 1753; FBI 3:311; FPM 500; Mayur. 153; Grierson in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:232. 1980.

Decumbent herbs, up to 30 cm tall. Leaves 1-6 x 0.5-3 cm, ovate to lanceate, scabrous, serrate to coarsely incised, succulent. Heads c. 1.2 cm across, solitary, on long terminal peduncles; ray flowers pale white and disc flowers yellow. Achenes turbinate.

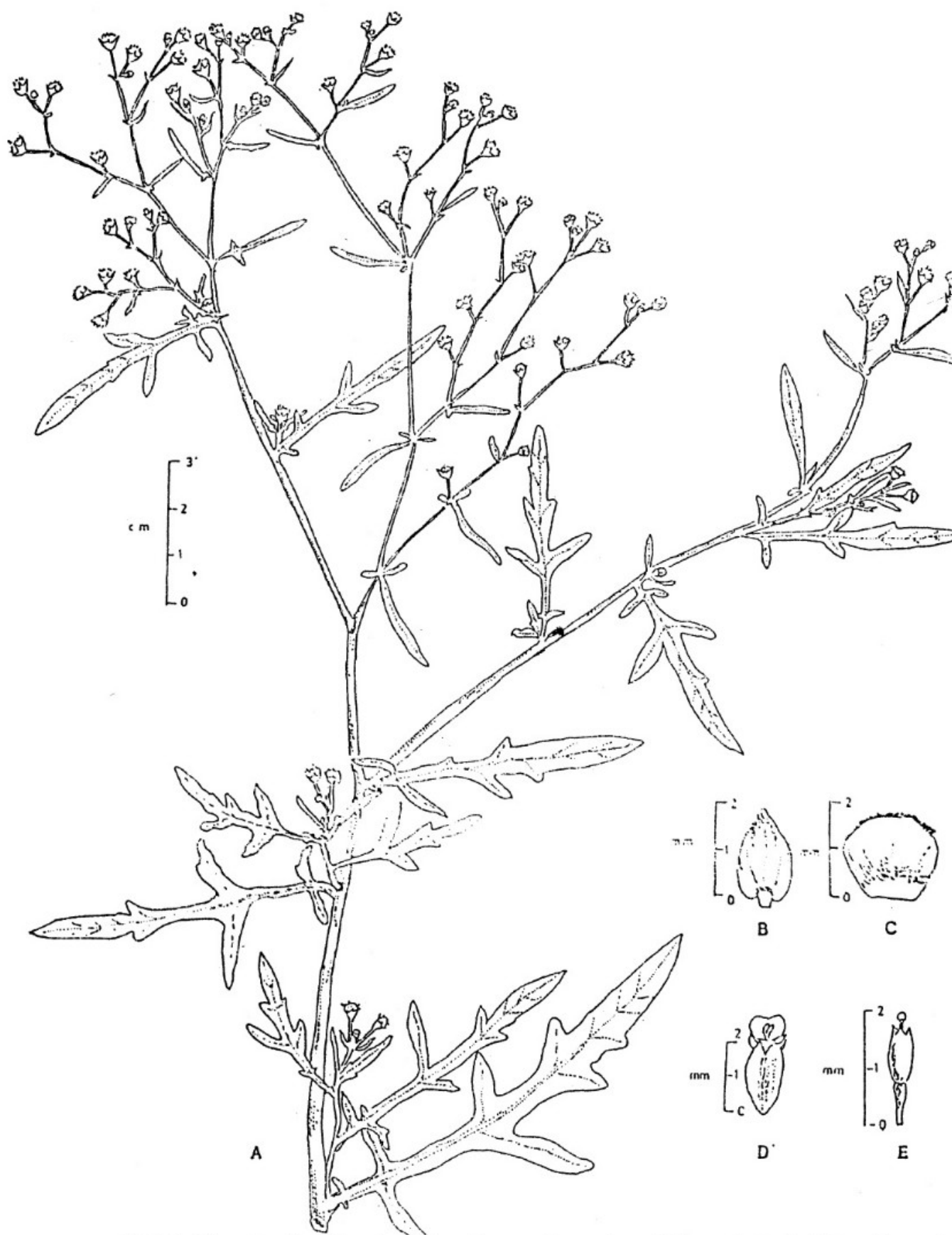


PLATE 16: *Parthenium hysterophorus* L. A - Twig. B & C - Involucral bracts. D - Ray floret. E - Disc floret.

A weed of waste places and old walls; very common. Fl. & Fr.: throughout the year.

Leaves ground into a paste and applied to fresh wounds for quick healing. Tamil: Rayil poondu. Native of S.America.

Vernonia Schreber (nom.cons.)

Vernonia cinerea (L.) Less in Linnaea 4:291. 1829; Wood 264; FBI 3:233; FPM 475; Mayur. 158; Grierson in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 1:133. 1980. *Conyza cinerea* L. Sp.Pl. 862. 1753.

Herbs, up to 1 m tall. Leaves 2-6 x 1-3 cm, ovate to lanceate, subentire. Heads c. 4 mm across, in terminal corymbs; flowers c. 4 mm long, tubular. Achenes up to 1.5 mm long.

A weed of roadsides and waste places; common. Fl. & Fr.: throughout the year.

Vernonia anthelmintica (L.) Willd. Sp.Pl. 3:1634. 1803; FBI 3:236; Grierson 121. *Conyza anthelmintica* L. Sp.Pl. ed. 2. 1207. 1763. *Centratherum anthelminticum* (L.) Kuntze, Rev.Gen.Pl. 1:320. 1891; FPM 459; Mayur. 159.

Mayuranathan records this.

Vicoa Cass.

Vicoa indica (L.) DC. in Wight, Contrib. 10. 1834; Brown 88; FPM 493; Mayur. 154; Grierson in Dassan. & Fosb. Rev.Handb.Fl. Ceylon 1:200. 1980. *Inula indica* L. Sp.Pl.ed. 2. 1237. 1763. *Vicoa auriculata* Cass. in Ann. Sci. Nat. (Paris) ser. 1. 17:418. 1829; FBI 3:297.

Herbs, up to 1 m tall. Leaves 3-7 x 0.5-2 cm, oblong-lanceate, serrate, base auriculate. Heads c. 1.8 cm across, rayed; flowers yellow. Achenes c. 1 mm long, 5-ribbed.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Xanthium L.

Xanthium indicum Koen. in Roxb. Fl. Ind. 3:601. 1832; Grierson in Dassan. & Fosb.Rev. Handb.Fl. Ceylon 1:209. 1980. *X. Strumarium* auct. non L. 1753; FBI 3:303; FPM 494; Mayur. 153.

Undershrubs, up to 1 m tall. Leaves 4-15 x 2-14 cm, ovate, often 3-5-lobed, hispid, irregularly serrate, base obtuse to cordate. Male heads c. 6 mm across, globose with numerous flowers; female heads c. 5 mm long when young, ovoid, 2-flowered. Fruits up to 1.8 cm long.

A weed along bunds of lakes and drying ditches; common. Fl. & Fr.: throughout the year.

Zinnia L. (nom.cons.)

Zinnia elegans Jacq. Coll.Bot. 3:152. 1789; Brown 89; Mayur. 159; Kosterm. in Blumea 25:281. 1979.

Herbs, up to 80 cm tall. Leaves 5-10 x 1.5-3.5 cm, oblong-elliptic scaberulent. Heads 4-8 cm across, solitary, terminal. on long peduncles; flowers white, pinkish-purple or orange-yellow. Achenes angled.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: September-April. Native of South America.

Artemisia L.

Artemisia sieversiana Ehrh. ex Willd. Sp.P1. 3:1845. 1805; FBI 3:329. *A. pallens* Wall. ex DC. Prodr. 6:120. 1838; Mayur. 160.

Mayuranathan records this, cultivated.

Erigeron L.

Erigeron sublyratus DC. in Wight, Contrib. 9. 1834. *E. asteroides* Roxb. Fl. Ind. 3:432. 1832 non Link 1822; FBI 3:254; FPM 479; Mayur. 158.

Mayuranathan records this.

Flaveria Juss.

Flaveria trinervia (Spreng.) Mohr, U.S.D.A. Contrib. Nat. Herb. 6:810. 1901. *Oedera trinervia* Spreng. Bot. Gart. Halle 63. 1800. *Flaveria australasica* Hook. in Mitch. J. Exped. Trop. Austral. 118. 1848; FPM 501; Mayur. 152. *F. contrayerba* Pers. Syn. 2:489. 1801; Mayur. 152.

Mayuranathan records this. Native of Australia.

CAMPANULACEAE

Lobelia L.

Lobelia alsinoides Lam. Encycl. 3:588. 1791; Moel. & Tuyn in Steenis, Fl. Males. ser. 1.6:126. 1960; Cramer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:168. 1983. *L. trionia* Roxb. Fl. Ind. 2:111. 1824; FBI 3:423; FPM 518; Barnes 20.

Prostrate or decumbent herbs; stems up to 15 cm long, 3-angled. Leaves 8-20 x 7-18 mm, ovate, serrate, base truncate or subcordate. Flowers c. 1 cm long, blue; corolla 2-lipped; ovary inferior. Capsules c. 3 mm across.

A weed of rice fields and marshy places; rare. Fl. & Fr.: November-March.

SPHENOCLEACEAE

Sphenoclea Gaertn. (*nom.cons.*)

Sphenoclea zeylanica Gaertn. Fruct. 1:113.t.24.f.5. 1788; Brown 94; FBI 3:438; FPM 520; Mayur. 160; Airy Shaw in Steenis, Fl. Males. ser. 1.4:27. 1948; Cramer in Dassan. & Fosb.Rev.Handb. Fl. Ceylon 4:186. 1983.

Herbs, up to 30 cm tall. Leaves 4-10 x 1-3 cm, oblong-elliptic to ovate, glaucous. Flowers c. 3 mm across, white, in dense spikes. Capsules c. 3 mm across, depressed-globose.

A weed of rice fields and ditches; fairly common. Fl. & Fr.: November-March.

PLUMBAGINACEAE

Plumbago L.

Corolla pale blue	.. .. .	<i>P.auriculata</i>
Corolla white	.. .. .	<i>P.zeylanica</i>

Plumbago auriculata Lam. Encycl. 2.270. 1786; Steenis in Steenis, Fl. Males. ser. 14:111. 1949. *P.capensis* Thunb. Prodr. Pl. Cap. 33. 1794; Brown 148; FPM 524; Mayur 161; BICS 163.

Herbs, up to 70 cm tall. Leaves 1-5 x 0.6-3.5 cm, whorled, lanceate. Flowers c. 1.2 cm across, in terminal spikes; calyx tubular, glandular-pubescent. Capsules splitting at apex.

Occasionally cultivated in gardens as an ornamental. Fl. & Fr.: December-April.

Plumbago zeylanica L. Sp.Pl. 151. 1753; Brown 147l; FBI 3:480; FPM 524; Mayur. 161; BICS 162.

Rambling undershrubs; branches up to 1.5m long. Leaves 3-8x1-5 cm, ovate or ovate-lanceate. Flowers c. 1.5 cm across, in terminal spikes; calyx glandular-viscous. Capsules splitting at apex.

A weed along bunds of lakes, in thickets and scrub jungles; common. Fl. & Fr.: December-March. Tamil: Chitthira moolam.

SAPOTACEAE

1. Calyx lobes 4; corolla succulent	.. .. .	<i>Madhuca</i>
1. Calyx lobes 6 or 8; corolla not succulent:		
2. Calyx lobes 6	.. .. .	<i>Manikara</i>
2. Calyx lobes 8	.. .. .	<i>Mimusops</i>

Madhuca Ham. ex Gmel.

Madhuca longifolia (Koen.) Macbr. Contrib. Gray Herb. (n.s.) 53:17. 1918; Royen in Blumea 10:53. 1960. *Bassia longifolia* Koen in L. Mant. Alt. 563. 1771; Brown 96; FBI 3:544; FPM 537; Mayur. 162.

Deciduous trees, up to 10 m tall. Leaves 6-12 x 2-5 cm, lanceate to oblong-elliptic. Flowers c. 1 cm across, pale yellow, in axillary fascicles at the ends of branches; corolla 10-lobed; stamens up to 20. Fruits c. 4 cm long, ovoid-ellipsoid.

Commonly cultivated along roadsides and parks, also runs wild. Fl.: March-May. Fr.: June-September. Tamil. Iluppai.

Manilkara Adans. (*nom.cons.*)

Berries 1-seeded	.. .. .	<i>M. hexandra</i>
Berries more than 2-seeded	.. .. .	<i>M. zapota</i>

Manilkara hexandra (Roxb.) Dubard in Ann. Inst. Bot. Geol. Colon. Marscille ser. 3.23:9.f.2. 1915; Royen in Blumea 7:408. 1953. *Mimusops hexandra* Roxb. Pl. Cor.t.15. 1795; FBI 3:549; FPM 538; Mayur. 163.

Shrubs or trees, up to 8 m tall. Leaves 7-11 x 2.5-5 cm, oblong-elliptic or oblanceate, coriaceous, glabrous. Flowers axillary, solitary or fascicled; stamens 6; ovary 12-locular. Berries c. 2 cm across, ovoid.

In scrub jungles; rare. Fl.: February-April. Fr.: April-August. Tamil: Arasankaal.

Manilkara zapota (L.) Royen in Blumea 7:410. 1953; Moore & Stearn in Taxon 16:383. 1967. *Achras zapota* L. Sp.Pl.1190. 1753. *A. sapota* L. Sp.Pl. ed. 2.470. 1762; Brown 95; FBI 3:534; FPM 533; Mayur. 163.

Shrubs or trees, up to 8 m tall. Leaves 5-12 x 2.5-5 cm, narrowly elliptic, coriaceous, lateral veins obscure. Flowers c. 6 mm across, axillary, solitary; outer calyx lobes 3, brown-tomentose; corolla c. 8 mm long, tubular. Berries 4-5 cm across, brown.

Commonly cultivated around houses. Fl.: February-July. Fr.: March-September.

Fruits edible. Tamil: Sappotta.

Mimusops L.

Mimusops elengi L. Sp.Pl. 349. 1753; Brown 95; FBI 3:458; FPM 538; Mayur. 163; Royen in Blumea 6:594. 1952.

Trees, up to 10 m tall. Leaves 8-11 x 2.5-4 cm, oblong-elliptic, glabrous, apex shortly acuminate. Flowers c. 1.5 cm across, sweet-scented, axillary, solitary or fascicled; stamens 8. Berries c. 2.5 cm long, ovoid.

Occasionally cultivated in gardens and avenues. Fl.: March-May. Fr.: June-September.

Corollas used by women to adorn their hair. Tamil: Mahilambo.

EBENACEAE**Diospyros L.**

- | | | |
|------------------------|---------|--|
| 1. Flowers 3-merous | .. .. . | <i>D. ferrea</i> var. <i>buxifolia</i> |
| 1. Flowers 4-5-merous: | | |
| 2. Corolla urceolate | .. .. . | <i>D. chloroxylon</i> |
| 2. Corolla rotate | .. .. . | <i>D. ebenum</i> |

Diospyros chloroxylon Roxb. Pl. Cor.t.49. 1795; Hiern, Trans. Cambridge Philos. Soc. 12:233. 1873; FBI 3:560; FPM 546; Mayur. 164.

Dioecious trees, up to 8 m tall. Leaves 2-6 x 1-3 cm, obovate-elliptic, pubescent. Staminate flowers c. 3 mm across, in axillary fascicles; pistillate flowers c. 5 mm across, solitary, axillary; corolla white, urceolate. Fruits c. 8 mm across.

In scrub jungles; common. Fl.: May-July. Fr.: July-December.

Fruits eaten by children.

Diospyros ebenum Koen. Physiogr. Salsk. Handl. 1:176. 1781; FBI 3:558; FPM 545; Barnes 20; Kosterm. in Dassan. & Fosb. Rev.Handb.Fl. Ceylon 3:16. 1981.

Dioecious trees, up to 10 m tall. Leaves 5-12 x 2-5 cm, oblong-obovate to oblong-lanceate. Flowers cream-coloured; staminate flowers c. 1 cm across, in axillary fascicles; pistillate Flowers solitary, axillary; corolla rotate. Fruits c. 1.4 cm across.

In scrub jungles, Tambaram; very rare. Fl.: March-April. Fr.: April-August.

Diospyros ferrea (Willd.) Bakh. var. *buxifolia* (Rottb.) Bakh. in Bull. Jard. Bot. Buitenzorg ser. 3.15:57. 1936; FTN 2:66. *Pisonia buxifolia* Rottb. in Nye Saml.Kongel. Danske Vidensk. Selk. Skr. 2:536. t. 4.f.2.1783. *Maba buxifolia* (Rottb.) Juss. in Ann. Mus.Hist. Nat. 5:418. 1804; FPM 539; Mayur. 164.

Dioecious shrubs, up to 4 m tall. Leaves 1-3 x 0.6-1.5 cm, obovate-orbicular to spatulate-obovate, coriaceous. Staminate flowers c. 3 mm across, in axillary fascicles; pistillate flowers solitary, axillary; corolla urceolate. Fruits c. 8 mm across.

In scrub jungles; common. Fl.: March-April. Fr.: April-August.

Diospyros tomentosa Roxb. Fl. Ind. 2:532. 1824; FBI 3:564; FPM 543; Mayur. 164.

Mayuranathan records this.

OLEACEAE

- | | | |
|---|---------|--------------------|
| Corolla tubular below, 5-or more-lobed above | .. .. . | <i>Jasminum</i> |
| Corolla not tubular below, 4-lobed almost to the base | .. .. . | <i>Chionanthus</i> |

Chionanthus L.

Chionanthus zeylanica L. Sp.Pl. 8. 1753; Stearn in Ann. Missouri Bot. Gard. 63:355. 1976. *Linociera zeylanica* (L.) Gamble in Gamble & Fischer, Fl.Pres. Madras 794. 1922 & 558. 1957 (repr.ed.). *Linociera purpurea* Vahl, Enum. P. 1:47. 1804; FBI 3:608.

Shrubs, up to 4 m tall. Leaves 4-8 x 2-4 cm, obovate or obovate-elliptic, coriaceous. Flowers c. 6 mm across, white, in axillary panicles. Fruits c. 10 x 8 mm.

In scrub jungles, Tambaram; very rare. Fl.: January-February. Fr.: March-April.

Jasminum L.

1. Calyx lobes under 2 mm long:

2. Twigs tomentose; cymes many-flowered

.. .. . *J. auriculatum*

2. Twigs glabrous; cymes 1-3-flowered

.. .. . *J. angustifolium* var.
angustifolium

1. Calyx lobes over 4 mm long:

3. Corolla lobes linear

.. .. . *J. angustifolium* var.
sessiliflorum

3. Corolla lobes not linear

.. .. . *J. sambac*

Jasminum angustifolium (L.) Willd. Sp.Pl. 1:36. 1797 var. **angustifolium**; FPM 555; Mayur. 166; Green in Kew Bull. 40:226. 1985; FTN 2:70. *Nyctanthes angustifolia* L.Sp.Pl. 6. 1753.

Twiners. Leaves 2-4 x 1-3 cm, ovate to ovate-lanceate. Flowers c. 4 cm across, white with purplish tinge without, sweet-scented, in simple terminal dichasia or solitary; pedicel c. 1.2 cm long; calyx lobes 5-7, subulate; corolla 8-10-lobed. Berries c. 1 cm across, subglobose, purplish-black when ripe.

In scrub jungles and thickets; common. Fl.: & Fr.: July-October. Tamil: Kaattu malli.

Jasminum angustifolium (L.) Willd. var. **sessiliflorum** (Vahl) Green in Kew Bull. 40:227. 1985; FTN 2:70. *J.sessiliflorum* Vahl, Enum. Pl. 1:29. 1804; FPM 555; Mayur. 166.

Twiners. Leaves 1.5-3.5 x 1-3 cm, ovate or ovate-elliptic. Flowers c. 4 cm across, white, solitary or in terminal dichasia; corolla tube c. 1.5 cm long; lobes 8-10, each c. 2 cm long. Fruits c. 1 cm across, purplish-black when ripe.

In scrub jungles; common. Fl.: May-July. Fr.: July-September. Tamil: Kaattu malli.

Jasminum auriculatum Vahl, Symb.Bot.3:1. 1794; Wood 267; FBI 3:600; FPM 555; Mayur. 166; FTN 2:71.

Straggling or twining shrubs. Leaflets 1-3, terminal one 2-3.5 x 1.7-2.5 cm, ovate, laterals much smaller, elliptic to linear, sometimes absent. Flowers c. 2 cm across, white, in terminal and axillary cymes. Fruits c. 8 mm across, purplish-black when ripe.

In scrub jungles and thickets; rare. Fl. & Fr.: December-April.

Jasminum sambac (L.) Ait. Hort. Kew. 1:8. 1789; FBI 3:591; FPM 554; Mayur. 166; BICS 218. *Nyctanthes sambac* L. Sp. Pl. 6. 1753.

Scandent shrubs or woody twiners. Leaves 4-12 x 2-6 cm, ovate or ovate-elliptic, apex obtuse, acute or acuminate. Flowers 3-4 cm across, solitary or in terminal dichasia; corolla lobes usually numerous.

Commonly cultivated around houses and in fields. Fl.: throughout the year.

Flowers made into garlands, also used to adorn hair by women. Tamil: Gundumalli.

NYCTANTHACEAE

Nyctanthes L.

Nyctanthes arbor-tristis L. Sp. Pl. 6. 1753; Brown 99; FBI 3:603; FPM 556; Mayur. 165; H.N. Moldenke & A.L. Moldenke in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:179. 1983.

Shrubs or small trees, up to 6 m tall. Leaves 3-12 x 2-8 cm, ovate or ovate-oblong, scabrous, entire or toothed, base cordate to cuneate. Flowers c. 1.6 cm across, in umbellate panicles; corolla tube orange-yellow; lobes white. Capsules c. 2 cm across, suborbicular, 2-valved.

Commonly cultivated in gardens and near temples. Fl. & Fr.: throughout the year.

Flowers used by Hindus in worship. Tamil: Pavazha malli.

SALVADORACEAE

Twigs spiny; flowers unisexual
Twigs not spiny; flowers bisexual

.. .. . *Azima*
.. .. . *Salvadora*

Azima Lam.

Azima tetracantha Lam. Encycl. 1:343. 1783 & Tabl. Encycl. t.807. 1799 p.p.; FBI 3:620; FPM 562; Mayur. 167.

Dioecious, straggling shrubs or lianes. Leaves 1-3.5 x 0.8-2.5 cm, elliptic, coriaceous, glabrous, apex apiculate; spines in axillary pairs. Flowers c. 3 mm across, 4-merous, greenish-white; staminate flowers in axillary fascicles; pistillate flowers usually solitary. Berries c. 1.2 cm across, 1-seeded.

In thickets, especially near backwater and canals; rare. Fl. & Fr.: December-May.

Fruits eaten by children. Tamil: Changam chedi.

Salvadora L.

Salvadora persica L. var. **wightiana** (Planch. ex Thw.) Verdc. in Kew Bull. 19:150; 1964; FTN 2:74. *S. wightiana* Planch. ex Thw. Enum. Pl. Zeyl. 190. 1860. *S. persica* auct. non L. 1753; FPM 562; Mayur. 167.

Shrubs or small trees, up to 8 m tall; branches pendulous. Leaves 2-5 x 1-3 cm, elliptic-lanceate or ovate, glabrous, shiny. Flowers c. 5 mm across, pale yellow, in terminal and axillary panicles; corolla lobes reflexed. Fruits c. 4 mm across.

In thickets and jungles, especially near backwaters, Ennur; rare. Fl.: March-April. Fr.: April-June.

APOCYNACEAE

- | | | |
|---|---------|---------------------|
| 1. Leaves alternate: | | |
| 2. Leaves linear | .. .. . | <i>Cascabela</i> |
| 2. Leaves not linear: | | |
| 3. Fruit a fibrous drupe | .. .. . | <i>Cerbera</i> |
| 3. Fruit a pair of follicles | .. .. . | <i>Plumeria</i> |
| 1. Leaves opposite or whorled: | | |
| 4. Plants thorny | .. .. . | <i>Carissa</i> |
| 4. Plants not thorny: | | |
| 5. Leaves opposite: | | |
| 6. Woody climbers: | | |
| 7. Corolla under 1.2 cm across | .. .. . | <i>Ichnocarpus</i> |
| 7. Corolla over 1.5 cm across | .. .. . | <i>Vallaris</i> |
| 6. Herbs, shrubs or trees: | | |
| 8. Corolla with branched corona; anthers exerted | .. .. . | <i>Wrightia</i> |
| 8. Corolla without branched corona; anthers included: | | |
| 9. Herbs or undershrubs | .. .. . | <i>Catharanthus</i> |
| 9. Shrubs | .. .. . | <i>Ervatamia</i> |
| 5. Leaves whorled: | | |
| 10. Flowers under 1.5 cm across | .. .. . | <i>Rauvolfia</i> |
| 10. Flowers over 2.5 cm across: | | |
| 11. Leaves linear to lanceate | | |
| 11. Leaves not as above | .. .. . | <i>Allamanda</i> |

Allamanda L.

Allamanda cathartica L. Mant. Alt. 214. 1771; Brown 104; FPM 577; Mayur. 169; BICS 196; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:25. 1983.

Straggling or climbing shrubs. Leaves 6-10 x 2.5-4 cm, elliptic. Flowers c. 6 cm across, yellow; corolla funnellform.

Commonly cultivated in gardens as an ornamental. Fl.: throughout the year.

Carissa L. (*nom. cons.*)

Carissa spinarum L. Mant. Alt. 559. 1771; FBI 3:631; FPM 565; Mayur. 169; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:35. 1983.

Shrubs, often straggling or climbing; thorns often once or twice forked. Leaves 2-3.5 x 1-2 cm, elliptic to elliptic-ovate, pale green, coriaceous. Flowers c. 1.5 cm across, white, in terminal cymes, often on thorns. Berries c. 1.2 x 1 cm, ellipsoid-globose, purplish-black when ripe.

In scrub jungles and thickets; very common. Fl.: April-July. Fr.: July-December.

Fruits eaten by children. Tamil: Kalaa chedi.

Carissa carandas L. Mant.Pl. 52. 1767; Brown 104; FBI 3:360; FPM 565; Mayur. 169; Huber 37.

Mayuranathan records this.

Cascabela Rafin.

Cascabela thevetia (L.) Lippold in Feddes Repert. 91:52. 1980; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:907. 1983. *Cerbera thevetia* L. Sp.Pl. 209. 1753. *Thevetia neriifolia* Juss. ex Steud. Nom.Bot. ed. 2.2:680. 1841 (*nereifolia*); Brown 105; FPM 577; Mayur. 170; BICS 193. *Thevetia peruviana* (Pers.) Merr. in Philipp. J.Sci. Bot. 9:130. 1914; Huber in Dassan. & Fosb.Rev.Handb. Fl. Ceylon 4:29. 1983. *Cerbera peruviana* Pers. Syn. 1:267. 1809.

Shrubs or small trees, up to 7 m tall. Leaves 10-15 x 0.4-0.8 cm, linear. Flowers c. 4 cm across, usually yellow, sometimes pinkish or whitish, in terminal cymes; corolla funnellform; ovary unilocular; ovules parietal. Drupes c. 4 cm across, black when ripe.

Commonly cultivated in gardens as a hedge plant, also runs wild. Fl. & Fr.: throughout the year.

Kernel of seeds poisonous, used by local people for suicidal purposes (ground and consumed). Tamil: Manchal alari.

Catharanthus G. Don

Annual herbs; corolla under 1.5 cm across	.. .. .	<i>C. pusillus</i>
Perennial undershrubs; corolla over 2 cm across	.. .. .	<i>C. roseus</i>

Catharanthus pusillus (Murr.) G.Don. Hist. 4:95. 1837; Huber in Dassan. & Fosb.Rev.Handb.Fl.Ceylon 4:45. 1983. *Vinca pusilla* Murr. Comm. Gotting 3:66. 1773; FBI 3:640. *Lochnera pusilla* (Murr.) Schum. in Engler & Prantl, Pflanzenf. 4(2): 145. 1895; FPM 568; Mayur. 171.

Herbs, up to 15 cm tall. Leaves 2-4 x 0.5-1.5 cm, elliptic. Flowers c. 8 mm across, white; corolla salverform; tube up to 1 cm long. Follicles up to 3 x 0.2 cm, sub-cylindric.

A weed of open, moist places, also along sandy seashores; rare. Fl. & Fr.: December-March.

Catharanthus roseus (L.) G.Don. Gen.Hist. 4:95. 1837; Stearn in Lloydia 29:196. 1966; Huber 44. *Vinca rosea* L. Syst. Nat.ed. 10.2:944. 1759; Brown 106; FBI 3:640; BICS 200. *Lochnera rosea* (L.) Reichb.Conspect. Reg.Veg. 134. 1828; FPM 569; Mayur. 171.

Herbs or undershrubs, up to 50 cm tall. Leaves 2-5 x 1-2.5 cm, elliptic, apex mucronate. Flowers c. 2.3 cm across, pink or white; corolla salverform. Follicles up to 3 x 0.3 cm.

Commonly cultivated in gardens and in barren fields, also runs wild. Fl. & Fr.: throughout the year.

Roots exported, for the extraction of alkaloids used in medicine (anticancer drug). Tamil: Chudukaattu malli, Nithya kalyani.

Cerbera L.

Cerbera odollam Gaertn. Fruct. 2:193.t.124.f.1.1791; Brown 105; FBI 3:638; Huber in Dassan. & Fosb. Rev.Handb. Fl.Ceylon 3:53. 1983. *C. manghas* L. Sp.Pl.208. 1753 p.p.; FPM 566; Mayur. 170.

Shrubs or small trees, up to 7 m tall. Leaves 10-30 x 3-6 cm, oblanceate-elliptic, coriaceous. Flowers c. 4 cm across, white, in axillary long-peduncled cymes; corolla funnelform. Drupes up to 8 x 7 cm, subglobose, with fibrous mesocarp.

Along river banks near sea, Adayar; rare. Fl. & Fr.: throughout the year.

Ervatamia (DC.) Stapf

Ervatamia divaricata (L.) Burkill in Rec.Bot.Surv.India 10:320. 192^c, Huber in Dassan. & Fosb.Rev.Handb.Fl.Ceylon 4:27. 1983. *Nerium divaricatum* L.Sp.Pl. 20^o 1753. *Tabernaemontana coronaria* (Jacq.) Willd. Enum. Hort.Berol.275. 1809; Brown 106; FBI 3:646; BICS 205. *Nerium coronarium* Jacq. Collectanea 1:138. 1767. *Ervatamia coronaria* (Jacq.) Stapf in Dyer, Fl. Trop. Africa 4(1):127. 1902; FPM 571; Mayur. 172.

Shrubs, up to 5 m tall. Leaves 5-9 x 2-3 cm, lanceate to elliptic, shiny, apex acuminate; stipules intrapetiolar. Flowers c. 2.3 cm across, white, in terminal cymes.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: February-August.

Flowers crushed and the juice applied in eye ailments. Tamil: Nandhiyavattai.

Ichnocarpus R. Br. (nom.cons.)

Ichnocarpus frutescens (L.) R.Br. in Ait. Hort. Kew.ed. 2.2:69. 1811; Brown 108; FBI 3:669; FPM 577; Mayur. 173; Huber in Dassan. & Fosb.Rev.Handb.Fl.Ceylon 4:71. 1983. *Apocynum frutescens* L. Sp.Pl. 213. 1753.

Herbs. Leaves 3-7 x 1.5-3 cm, ovate-elliptic or obovate. Flowers c. 1 cm across, pale white, in paniculate cymes; corolla salverform. Follicles 5-12 x 0.1-0.2 cm, cylindrical, brown-tomentose.

In scrub jungles; common. Fl. & Fr.: November-March.

Nerium L.

Nerium oleander L. Sp.Pl.209. 1753; Huber in Dassan. & Fosb.Rev.Handb.Fl.Ceylon 4:28. 1983. *N. odorum* Soland. in Ait. Hort.Kew. 1:297. 1789; Brown 107; FBI 3:655; FPM 577; Mayur. 173; BICS 199. *N. indicum* Mill. Gard.Dict.ed. 8.n.2. 1768.

Shrubs, up to 4 m tall. Leaves 7-12 x 1-2 cm, lanceate, coriaceous, lateral veins numerous and running at right angles to midrib. Flowers c. 3.5 cm across, white or pink, in terminal cymes; corolla with prominent coronal hairs. Follicles up to 12 x 0.5 cm, subcylindric.

Commonly cultivated in gardens and near temples as an ornamental. Fl. & Fr.: throughout the year. Tamil: Arali, Alari.

Plumeria L.

Leaves acute to acuminate at apex	.. .. .	<i>P. rubra</i>
Leaves obtuse to emarginate at apex	.. .. .	<i>P. alba</i>

Plumeria alba L. Sp.Pl. 210. 1753; Brown 106; FPM 577; Mayur. 170.

Shrubs or small trees, up to 6 m tall. Leaves 15-25 x 3-6 cm, oblong-ob lanceate, coriaceous, lateral veins prominent. Flowers c. 4 cm across, white, in axillary long-peduncled cymes. Follicles up to 15 x 2.5 cm.

Commonly cultivated in gardens and parks, also runs wild. Fl. & Fr.: throughout the year. Tamil: Seemai alari.

Plumeria rubra L. Sp.Pl.209. 1753; Huber in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 4:29. 1983. *P. acutifolia* Poir. in Lam. Encycl. (Suppl.2):667. 1812; FBI 3:641; FPM 577; Mayur. 169.

Shrubs or small trees, up to 6 m tall. Leaves 20-35 x 3-5 cm, elliptic-oblong. Flowers c. 4 cm across, white with yellow centre or red, in axillary long-peduncled cymes. Follicles up to 20 x 3 cm.

Commonly cultivated in gardens and near temples as an ornamental. Fl.: March-June. Fr.: June-September.

Rauvolfia L.

Corolla tubes under 5 mm long	.. .. .	<i>R. tetraphylla</i>
Corolla tubes over 10mm long	.. .. .	<i>R. serpentina</i>

Rauvolfia serpentina (L.) Benth. ex Kurz, For. Fl. Burma 2:171. 1877; FBI 3:632; FPM 567; Markgraf in Blumea 30:161. 1984. *Ophioxylon serpentinum* L. Sp. Pl. 1043. 1753; Brown 105.

Undershrubs, up to 50 cm tall. Leaves 5-15 x 1.5-5 cm, lanceate-elliptic. Flowers c. 1 cm across, rosy-white, in terminal cymes; pedicels and calyx red; corolla salverform. Drupes c. 8 mm across, subglobose.

Occasionally cultivated in gardens. Fl. & Fr.: December-March.

Alkaloids extracted from the roots useful in controlling hypertension. Tamil: Chivan amel podi.

Rauvolfia tetraphylla L. Sp.Pl. 208. 1753; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:917. 1983. *R. canescens* L. Sp.Pl. ed. 2.303. 1762; Brown 105; FPM 568; Mayur. 171.

Undershrubs or shrubs, up to 1.5m tall. Leaves 4-8 x 2-4 cm, 4 in a whorl, unequal, oblong-elliptic, pubescent. Flowers c. 3 mm across, greenish-white, in short-peduncled cymes. Drupes c. 9 mm across, red when ripe.

A weed of waste places, especially near seashores, sometimes cultivated; rare. Fl. & Fr.: October-April. Tamil: Paambukkalaa chedi.

Vallaris Burm. f.

Vallaris solanacea (Roth) Kuntze, Rev. Gen. 147. 1891; FPM 573; Mayur. 172; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:59. 1983. *Peltanthera solanacea* Roth, Nov. Pl. Sp. 132. 1821. *Vallaris heynii* Spreng. Syst. Veg. 1:635; FBI 3:650.

Woody climbers. Leaves 5-10 x 2-3.2 cm, oblong-lanceate, glabrous. Flowers c. 1.5 cm across, whitish, in cymes; corolla tubular below and campanulate above.

Occasionally cultivated in gardens as an ornamental. Fl.: January-April.

Wrightia R. Br.

Wrightia tinctoria (Roxb.) R. Br. Mem. Wern. Nat. Hist. Soc. 1:74. 1811; FBI 3:653; FPM 573; Mayur. 173; Mabb. in Taxon 6:524. 1977. *Nerium tinctorium* Roxb. Orient. Repert. 1:39. 1791.

Trees, up to 10 m tall. Leaves 6-15 x 2-5 cm, elliptic-lanceate, glabrate, apex acuminate. Flowers c. 2.5 cm across, white, in cymes; corolline corona prominent, exerted. Follicles up to 25 x 0.6 cm, connate at apex.

In jungles and waste plaes; fairly common. Fl.: April-June. Fr.: May-September. Tamil: Paalai.

ASCLEPIADACEAE

- | | | |
|--|---------|--------------------|
| 1. Corolla tubular | .. .. . | <i>Ceropegia</i> |
| 1. Corolla not tubular: | | |
| 2. Herbs or shrubs: | | |
| 3. Stems angled, succulent | .. .. . | <i>Caralluma</i> |
| 3. Stems terete, not succulent | .. .. . | <i>Calotropis</i> |
| 2. Climbers: | | |
| 4. Stems succulent | .. .. . | <i>Sarcostemma</i> |
| 4. Stems not succulent: | | |
| 5. Leaves linear or lanceate, rarely ovate-lanceate: | | |

6. Corolla under 8 mm across	.. .. .	<i>Secamone</i>
6. Corolla over 12 mm across	.. .. .	<i>Oxystelma</i>
5. Leaves not as above:		
7. Follicles softly echinate	.. .. .	<i>Pergularia</i>
7. Follicles not echinate:		
8. Corolla lobes bearded within	.. .. .	<i>Leptadenia</i>
8. Corolla lobes not bearded within:		
9. Leaves succulent; follicles 3-angled	.. .. .	<i>Pentatropis</i>
9. Leaves not succulent; follicles not 3-angled:		
10. Corona adnate to corolla tube	.. .. .	<i>Gymnema</i>
10. Corona adnate to staminal column:		
11. Corolla greenish	.. .. .	<i>Wattakaka</i>
11. Corolla pale yellow with purplish centre	.. .. .	<i>Tylophora</i>

Calotropis R.Br.

Calotropis gigantea (L.) R.Br. in Ait. Hort. Kew.ed. 2.2:78. 1811; Brown 101; FBI 4:17; FPM 585; Mayur. 177; Huber in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 4:78. 1983. *Asclepias gigantea* L. Sp.Pl. 214. 1753.

Shrubs, up to 4 m tall. Leaves 6-15 x 3-6 cm, panduriform, obovate or oblong, glaucous, base amplexicaul-cordate. Flowers c. 2.5 cm across, pale violet or white, in terminal umbel-like cymes. Follicles up to 10 x 4 cm.

Along railway tracks, roadsides and other waste places, also on old walls; common. Fl. & Fr.: throughout the year.

Latex poisonous. Tamil: Yerukku.

Caralluma R.Br.

1. Flowers solitary or in racemes:

2. Corolla lobes hairy all along their margins	<i>C. adscendens</i> var. <i>attenuata</i>
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2. Corolla lobes hairy only at their apices	<i>C. stalagmifera</i>
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1. Flowers in umbels	<i>C. indica</i>
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Caralluma adscendens (Roxb.) Haw. var. **attenuata** (Wight) Gravely & Mayur. in Bull. Madras Govt. Museum n.s. 4:13. 1931; FTN 2:81. *C. attenuata* Wight, Ic. t. 1268. 1848; FPM 605; Mayur. 176.

Succulent herbs, up to 40 cm tall; stems 4-angled. Leaves 2-3 x 0.5-1 mm, borne along angles, subulate, caducous. Flowers c. 8 mm across, purplish; corolla lobes c. 7 mm long, abaxially folded lengthwise. Follicles up to 9 x 0.5 cm.

In scrub jungles and thickets; common. Fl. & Fr.: January-May.

Stems fried, ground into a paste ('thuvayal') and eaten along with other food. Tamil: Kalimuliyaan.

Caralluma indica (Wight & Arn.) N.E. Br. in Gard. Chron. 2:369. 1892; FPM 606; Mayur. 175; Gravely & Mayur. 23.t.3. *Hutchinia indica* Wight & Arn. Prodr. 34. 1834.

Succulent herbs with white, underground, creeping stems; aerial stems up to 20 cm tall, 4-angled. Leaves 1-2 x 0.5-1 mm, subulate, caducous. Flowers c. 1.2 cm across, greenish-purple; corolla densely pubescent within. Follicles up to 7 x 0.5 cm.

In thickets and scrub jungles; rare. Fl. & Fr.: December-April.

Caralluma stalagmifera Fischer in Kew Bull. 430. ff. 1-6. 1925; Mayur. 176; Gravely & Mayur. 16.t.1; FPM 1303.

Succulent herbs, up to 35 cm tall; stems 4-angled. Leaves 2-3 x 0.5-1 mm, subulate, caducous. Flowers c. 1.2 cm across, purplish; corolla lobes c. 8 mm long, oblong-lanceate, hairy at apex. Follicles up to 8 x 0.5 cm.

In scrub jungles; very rare. Fl. & Fr.: December-April.

Ceropegia L.

Stems and leaves succulent

.. ..

C. juncea

Stems and leaves not succulent

.. ..

C. candelabrum var.
biflora

Ceropegia candelabrum L. var. *biflora* (L.) Ansari in Fasc. Fl. India 16:12. 1984; FTN 2:82. *C. biflora* L. Sp.Pl.211. 1753. *C. tuberosa* Roxb. Pl.Cor.t.9. 1795; FPM 603; Mayur. 178. *C. candelabrum* L. subsp. *tuberosa* (Roxb.) Huber in Fl.Ceylon 4:120. 1983.

Twiners. Leaves 3-6 x 1-3 cm, ovate-elliptic or lanceate-oblong, apex often apiculate. Flowers c. 3 cm long, pale yellow, in axillary cymes. Follicles up to 12 x 0.5 cm.

In scrub jungles; fairly common. Fl. & Fr.: December-February.

Ceropegia juncea Roxb. Pl. Cr. 1:12.t.10. 1795; Brown 103; FBI 4:68; FPM 602; Mayur. 178; Huber 115; Ansari 18.

Succulent twiners; stems green. Leaves 1-2 x 0.3-0.5 cm, oblong-lanceate, succulent. Flowers c. 4 cm long, purplish-green, in axillary cymes; corolla tube inflated below, narrowed in the middle and funnellform above. Follicles up to 15 x 0.6 cm.

In scrub jungles, often twining over *Euphorbia antiquorum*; rare. Fl. & Fr.: November-March.

Ceropegia bulbosa Roxb. Pl. Cor.t.7. 1795 & Fl. Ind. 2:28. 1824; FBI 4:67; FPM 602; Mayur. 178; Ansari 10.

Mayuranathan records this.

Gymnema R.Br.

Gymnema sylvestre (Retz.) R.Br. ex Schult. Syst. Veg. 6:57. 1820; FBI 4:29; FPM 590; Mayur. 180; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:100. 1983. *Periploca sylvestris* Retz. obs. Bot. 2:15. 1781.

Woody climbers. Leaves 3-6.5 x 2-3.5 cm, ovate to ovate-oblong, pubescent or glabrescent. Flowers c. 3 mm across, pale yellow, in axillary and extra-axillary, umbellate cymes. Follicles up to 7 x 0.6 cm, subterete.

In scrub jungles; common. Fl. & Fr.: October-February.

Leptadenia R.Br.

Leptadenia reticulata (Retz.) Wight & Arn. in Wight, Contrib. Bot. India 47. 1834; FBI 4:63; FPM 598; Mayur. 179; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:112. 1983. *Cynanchum reticulatum* Retz. Obs. Bot. 2:15. 1781.

Woody twiners. Leaves 3-8 x 1-5 cm, ovate to ovate-oblong, coriaceous, puberulous. Flowers c. 7 mm across, pale yellow, in umbellate cymes. Follicles up to 8 x 2.5 cm, broad towards base.

On fences and hedges; fairly common. Fl. & Fr.: June-September.

Oxystelma R.Br.

Oxystelma secamone (L.) Schum. in Engler & Prantl, Pflanzenf. 4(2):229. 1895. *Periploca secamone* L. Mant. Alt. 216. 1771. *Oxystelma esculentum* (L.f.) R.Br. ex Schult. Syst. Veg. 6:89. 1820; Wood 268; FBI 4:17; FPM 586; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:84. 1983. *Periploca esculenta* L.f. Suppl. Pl. 168. 1781.

Slender climbers. Leaves 3-8 x 0.3-1.5 cm, linear to lanceate, rarely ovate-lanceate, glabrous. Flowers c. 1.8 cm across, pinkish-white, in lax cymes. Follicles up to 7 x 2 cm.

On hedges near canals, rice fields etc.; rare. Fl. & Fr.: November-March.

Pentatropis Wight

Pentatropis capensis (L.f.) Bullock in Kew Bull. 9:284. 1955; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:85. 1983. **Cynanchum capense** L.f. Suppl. Pl. 168. 1781. *Pentatropis microphylla* (Heyne ex Roth) Wight, Contrib. Bot. India 52. 1834; FBI 4:20; FPM 587; Mayur. 180. *Asclepias microphylla* Heyne ex Roth, Nov. Pl. Sp. 177. 1821.

Twiners. Leaves 1.5-2.5 x 1-1.5 cm, ovate or ovate-oblong, base subcordate, apex mucronate. Flowers c. 1 cm across, pale purple, in extra-axillary, umbel-like corymbs. Follicles up to 5 x 1 cm.

On hedges and fences; fairly common. Fl. & Fr.: July-September.

Pergularaia L.

Pergularia daemia (Forssk.) Chiov. Result. Sci. Miss. Stefani-Paoli Somal. Ital. 1:115. 1916; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:86. 1983. *Asclepias daemia* Forssk. Fl. Aegypt.-Arab. 51. 1775. *Daemia extensa* (Jacq.) R.Br. in Ait. Hort. Kew. ed. 2.2:76. 1811; Brown 102; Wood 269; FBI 4:20. *Cynanchum extensum* Jacq. Misc. 2:353. 1781-1782. *Pergularia extensa* (Jacq.) N.E.Br. in Harvey & Sonder, Fl. Cap. 4(1):758. 1908; FPM 588; Mayur. 179.

Climbers. Leaves 3-8 x 4-9 cm, orbicular-cordate, tomentose, apex shortly acuminate. Flowers c. 1.5 cm across, greenish, in long-peduncled, umbel-like cymes; corolla lobes pubescent within. Follicles up to 7 x 2 cm, puberulous.

On fences and hedges, also in jungles; fairly common. Fl. & Fr.: November-April.

Sarcostemma R.Br.

Sarcostemma acidum (Roxb.) Voigt in Engler & Prantl, Pflanzenf. 4(2):251. 1895. *Asclepias acida* Roxb. Fl. Ind. 2:31. 1824. *Sarcostemma brevistigma* Wight & Arn. in Wight, Contrib. Bot. India 59. 1834; Brown 101; FBI 4:26; FPM 589; Mayur. 175.

Succulent twiners; stems green, cylindrical. Leaves very minute, caducous. Flowers c. 5 mm across, white, in terminal umbels; corolla rotate. Follicles up to 10 x 0.5 cm.

In scrub jungles and thickets; very common. Fl.: December-April. Fr.: March-May.

Secamone R.Br.

Secamone emetica (Retz.) R.Br. ex Schult. Syst. Veg. 6:124. 1820; FBI 4:36; FPM 583; Barnes 21; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:88. 1983. *Periploca emetica* Retz. Obs. Bot. 2:14. 1781.

Glabrous twiners. Leaves 3-7 x 0.7-1.7 cm, linear-lanceate or ovate-lanceate. Flowers c. 4 mm across, pale yellow, in short-peduncled cymes. Follicles up to 5 x 0.5 cm, ellipsoid, semiterete.

In scrub jungles; rare. Fl. & Fr.: November-March.

Tylophora R.Br.

Tylophora indica (Burm.f.) Merr. Philipp. J. Sci. Bot. 19:373. 1921; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:91. 1983. *Cynanchum indicum* Burm.f. Fl. Ind. 70. 1768. *Tylophora asthmatica* (L.f.) Wight & Arn. in Wight, Contrib. Bot. India 51. 1834; Wood 269; FBI 4:44; FPM 593; Barnes 22. *Asclepias asthmatica* L.f. Suppl. Pl. 171. 1781.

Twiners. Leaves 4-8 x 1.5-6 cm, ovate-oblong to broadly ovate or subcordate, apex apiculate. Flowers c. 1.2 cm across, in umbellate cymes. Follicles up to 8 x 1 cm.

On fences and in scrub jungles, fairly common. Fl. & Fr.: August-December.

Leaves chewed by asthma patients for relief.

Wattakaka Hassk.

Wattakaka volubilis (L.f.) Stapf in Curtis, Bot.Mag.t. 8976. 1923; Huber in Dassan. & Fosb. Rev.Handb. Fl. Ceylon 4:108. 1983. *Asclepias volubilis* L.f. Suppl. Pl. 170. 1781. *Dregea volubilis* (L.f.) Benth ex Hook. f. in Hook.f.Fl.Brit. India 4:46. 1883. *Marsdenia volubilis* (L.f.) Cooke, Fl. Pres. Bombay 2:166. 1904; FPM 595; Mayur. 180.

Lianes. Leaves 4-10 x 3-7 cm, ovate to cordate, apex acute to acuminate. Flowers c. 1.2 cm across, in umbellate cymes. Follicles up to 10 x 3 cm, yellow-tomentose when young, glabrate when mature.

In jungles, on hedges and fences; common. Fl. & Fr.: January-August.

Toxocarpus kleinii Wight & Arn. in Wight, Contrib. Bot. India 61. 1834; FBI 4:14; FPM 584; Mayur. 181; Huber in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 4:89. 1983.

Mayuranathan records this.

PERIPLOCACEAE

- | | | |
|--------------------------------------|---------|---------------------|
| 1. Corolla over 3 cm across | .. .. . | <i>Cryptostegia</i> |
| 1. Corolla under 2 cm across: | | |
| 2. Flowers in axillary fascicles | .. .. . | <i>Hemidesmus</i> |
| 2. Flowers not in axillary fascicles | .. .. . | <i>Cryptolepis</i> |

Cryptolepis R.Br.

Cryptolepis grandiflora Wight, Ic.t.831. 1844-1845; FBI 4:5; FPM 580; Matthew & Rani in Matthew, Fl. Tamilnadu Carnatic 3:940. 1983.

Climbing shrubs. Leaves 4-8 x 2-3.5 cm, ovate to ovate-elliptic, coriaceous. Flowers c. 1.5 cm across, cream-coloured, in axillary cymes; corolla lobes c. 1.2 cm long. Follicles up to 10 x 1.2 cm, lanceate.

In scrub jungles, Vandalur hill; rare. Fl. & Fr.: December-April.

Cryptostegia R.Br.

Cryptostegia grandiflora R.Br. in Edward's Bot.Reg.5.t. 435. 1820; Brown 101; FBI 4:6; FPM 606; Mayur. 177; Huber in Dassan. & Fosb.Rev. Handb.Fl. Ceylon 4:183. 1983.

Straggling or climbing shrubs. Leaves 6-10 x 3-5 cm, elliptic to oblong-elliptic, coriaceous. Flowers c. 5 cm across, rosy-purple, in terminal dichasia. Follicles up to 9 x 2.5 cm.

Occasionally cultivated in gardens as an ornamental, also runs wild. Fl. & Fr.: throughout the year. Native of tropical Africa.

Hemidesmus R.Br.

Hemidesmus indicus (L.) R.Br. in Ait. Hort.Kew.ed. 2.2: 75. 1811; Wood 267; FBI 4:5; FPM 580; Mayur. 177; Huber in Dassan. & Fosb.Rev.Handb.F1. Ceylon 4:185. 1983. *Periploca indica* L.Sp.P1. 211. 1753.

Prostrate or twining herbs with thick, aromatic roots. Leaves 3-7 x 0.3-3 cm, linear to elliptic, often whitish along veins. Flowers c. 8 mm across, pale yellow. Follicles up to 12 x 0.6 cm.

In scrub jungles and open ground; common. Fl.: November-February. Fr.: December-April.

Roots yield "nannaari essence", used in "sherbeth", very cooling. Tamil: Nannaari. English: Indian Sarsaparilla.

LOGANIACEAE

Trees or shrubs; leaves over 2 cm wide

.. .. .

Strychnos

Herbs; leaves under 0.3 cm wide

.. .. .

Mitrasacme

Mitrasacme Labil.

Mitrasacme indica Wight, Ic.t. 1601. 1850; Leenh. in Steenis, Fl. Males.ser. 1.6:384. 1962. *M. alsinoides* auct. non R.Br. 1810; FBI 4:80; FPM 607.

Stems up to 6 cm tall, filiform. Leaves 5-10 x 1-2 mm, linear-elliptic, glabrous. Flowers c. 1.5 mm across, pale white, axillary or extra-axillary, solitary. Capsules c. 2 mm across, subglobose; seeds minute, numerous.

A weed of marshy places, often associated with species of *Drosera*, *Lindernia* and *Utricularia*; rare. Fl. & Fr.: January-March.

Often mistaken for species of *Hedyotis*, but readily distinguished by the absence by interpetiolar stipules.

Strychnos L.

1. Climbing shrubs, with hooks

.. .. .

S. lenticellata

1. Trees, without hooks:

2. Fruits 2-4-seeded

.. .. .

S. nux-vomicaes

2. Fruits 1-2-seeded

.. .. .

S. potatorum

Strychnos lenticellata Hill in Kew Bull. 1917: 1591. 1917; FPM 610; FTN 2:91.

Branchlets often spirally coiled into hooks. Leaves 3-9 x 1.5-4.5 cm, ovate to elliptic or suborbicular, glabrous, somewhat 3-ribbed. Flowers c. 4 mm across, cream-coloured, in axillary cymes. Fruits c. 12 mm across, subglobose.

In scrub jungles; very rare. Fl.: January-February. Fr.: February-July.

Strychnos nux-vomica L. Sp.Pl. 189. 1753; Brown 108; FBI 4:90; FPM 610; Mayur. 181.

Trees, up to 10 m tall. Leaves 4-8 x 2-5 cm, ovate to ovate-elliptic or suborbicular, glabrous, 5-ribbed. Flowers c. 6 mm across, greenish, in terminal cymes. Fruits up to 5 cm across, globose; seeds discoid.

In jungles and waste places; rare. Fl.: December-March. Fr.: March-June. Tamil: Yetti.

Strychnos potatorum L.f. Suppl. Pl. 148. 1781; Wood 270; FBI 4:90; FPM 610; Mayur. 182; Mathew & Rani in Matthew, Fl. Tamilnadu Carnatic 3:967. 1983.

Trees, up to 10 m tall. Leaves 5-9 x 3-5 cm, elliptic, 5-ribbed. Flowers c. 5 mm across, greenish, in terminal cymes; corolla tube as long as lobes, woolly at throat. Fruits c. 1.7 cm across, globose; seeds flattened, orbicular.

In jungles and waste places; rare. Fl.: December-March. Fr.: February-May.

Powdered seeds clear muddy water. Tamil: Thaettaan kottai.

GENTIANACEAE

- | | | |
|--|---------|-------------------|
| 1. Flowers in axillary fascicles | .. .. . | <i>Enicostema</i> |
| 1. Flowers not in axillary fascicles: | .. .. . | <i>Canscora</i> |
| 2. Stems 4-winged; corolla rosy-pink | | |
| 2. Stems not winged; corolla other than rosy-pink: | | |
| 3. Corolla larger than calyx, blue | .. .. . | <i>Exacum</i> |
| 3. Corolla shorter than calyx, cream-coloured | .. .. . | <i>Hoppea</i> |

Canscora Lam.

Canscora heteroclita (L.) Gilg in Engler & Prantl, Pflanzenf. 4(2):76. 1895; Cramer in Dassan. & Fosb.Rev. Handb. Fl. Ceylon 3:73. 1981. *Gentiana heteroclita* L. Mant. Alt. 560. 1771. *Canscora sessiliflora* (Roxb.) Schult. & Schult.f.Syst.Veg. 3:230. 1827; FBI 4:104; FPM 618; Mayur. 184. *Pladera sessiliflora* Roxb.Fl.Ind. 1:400. 1820.

Herbs, up to 14 cm tall. Leaves 6-12 x 4-10 mm, gradually reduced to bracts above, sessile, ovate. Flowers c. 6 mm across, zygomorphic, 4-merous, terminal, solitary or in dichasia.

An attractive weed in wet situations; common. Fl. & Fr.: December-April.

Enicostema Blume (*nom.cons.*)

Enicostema axillare (Lam.) Raynal in Adanson 9:75. 1969; FTN 2:93. *Gentiana axillaris* Lam. Illustr. 1(2): 487. 1793 non Rafin. 1828, nec Reichb. 1828. *Enicostema littorale* auct. non Blume 1826; FBI 4:101; FPM 615; Mayur. 183.

Herbs, up to 15 cm tall. Leaves 3-5 x 0.4-0.8 cm, linear-oblong. Flowers c. 7 mm across, white. Capsules oblong, 2-valved.

A weed in playgrounds and other open places, Tambaram; rare. Fl. & Fr.: throughout the year. Tamil: Vellaruhu.

Exacum L.

Exacum pedunculatum L. Sp.Pl. 112. 1753; FBI 4:97; FPM 614; Mayur. 183; FTN 2:94.

Herbs, up to 20 cm tall; stems 4-angled. Leaves 2-3 x 0.8-1.4 cm, subsessile or sessile, ovate to ovate-lanceate, 3-nerved. Flowers c. 1.6 cm across, 4-merous, in terminal and axillary dichasia. Capsules subglobose.

A weed in wet situations; fairly common. Fl. & Fr.: December-April.

Hoppea Willd.

Hoppea dichotoma Willd. Ges. Naturf. Freunde Berlin Neue Schriften 3:435. 1801; FBI 4:100; FPM 616; Barnes 23; FTN 2:95.

Herbs, up to 8 cm tall; stems 4-angled. Leaves 3-7 x 1-4 mm, sessile, ovate, apex mucronate. Flowers c. 2 mm across, terminal, solitary or in dichasia, 4-merous; calyx c. 3 mm long; corolla c. 2.5 mm long. Capsules shorter than calyx; seeds black.

A weed in wet situations; fairly common. Fl. & Fr.: February- April.

MENYANTHACEAE

Nymphoides Hill.

Nymphoides hydrophylla (Lour.) Kuntze, Rev.Gen.Pl. 2:429. 1891; Cramer in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 3:208. 1981. *Menyanthes hydrophylla* Lour. Fl. Cochinch. 129. 1790. *Limnanthemum cristatum* (Roxb.) Griseb. Gen. Sp. Gentianac. 342. 1839; FBI 4:131; FPM 620; Mayur. 182. *Menyanthes cristata* Roxb. Pl. Cor. 2:3.t.105. 1798.

Herbs with short rhizomes and long petiole-like stems. Leaves 5-15 x 4-12 cm, ovate-orbicular, base deeply cordate. Flowers c. 2 cm across, white, in axillary fascicles. Capsules ovoid.

An aquatic weed of ponds and lakes; fairly common. Fl. & Fr.: November-April.

HYDROPHYLLACEAE

Hydrolea L. (nom.cons.)

Hydrolea zeylanica (L.) Vahl, Symb. Bot. 2:46. 1791; Brown 115; FBI 4:133; FPM 621; Mayur. 184; Backer in Steenis, Fl. Males. ser. 1.4:207. 1951. *Nama zeylanica* L.sp.Pl. 226. 1753.

Prostrate or erect herbs, rooting at lower nodes. Leaves 3-6 x 1-2 cm, lanceate, glabrous, entire. Flowers c. 1 cm across, blue, axillary, solitary, also in terminal racemes; calyx glandular-pubescent; corolla rotate. Capsules c. 4 mm across, subglobose, septicidal.

An aquatic weed, often on drying ditches and lakes; common. Fl. & Fr.: January-April.

BORAGINACEAE

- | | | |
|-------------------------------------|---------|---------------------|
| 1. Calyx lobes hastate at base | .. .. . | <i>Trichodesma</i> |
| 1. Calyx lobes not hastate at base: | | |
| 2. Styles two | .. .. . | <i>Coldenia</i> |
| 2. Style one | .. .. . | <i>Heliotropium</i> |

Coldenia L.

Coldenia procumbens L. Sp.Pl. 125. 1753; Wood 273; FBI 4:144; FPM 627; Mayur. 186; Kazmi in J. Arnold Arbor. 51:148. 1970.

Prostrate herbs: young stems white-villous. Leaves 2-4 x 1-3 cm, obovate, crenate, veins impressed deeply. Flowers c. 2 mm across, white, solitary, sessile or subsessile. Fruit a dry drupe of 4 one-seeded pyrenes.

A weed of drying ditches and lakes, also along bunds of lakes; common. Fl. & Fr.: March-September.

Heliotropium L.

- | | | |
|--|---------|------------------------|
| 1. Calyx woolly, closely enveloping the nutlets | .. .. . | <i>H. supinum</i> |
| 1. Calyx not woolly, not closely enveloping the nutlets: | | |
| 2. Leaves glabrous, succulent | .. .. . | <i>H. curassavicum</i> |
| 2. Leaves hairy, not succulent: | | |
| 3. Leaves over 5 cm long | .. .. . | <i>H. indicum</i> |
| 3. Leaves under 4 cm long: | | |
| 4. Corolla under 2.5 mm across | .. .. . | <i>H. marifolium</i> |
| 4. Corolla over 2.5 mm across: | | |
| 5. Leaves linear-lanceate | .. .. . | <i>H. bracteatum</i> |
| 5. Leaves ovate, elliptic or obovate | .. .. . | <i>H. ovalifolium</i> |

Heliotropium bracteatum R.Br. Prodr. 493. 1810; FBI 4: 151; FPM 630; Mayur. 189; Matthew & Rani in Matthew, Fl. Tamilnadu Carnatic 3:986. 1983.

Prostrate herbs. Leaves 1-3.5 x 0.3-0.7 cm, scabrous. Flowers c. 4 mm across, white, in terminal spike-like cymes; bracts lanceate; stigma conical above an umbrella-like ring. Fruit splitting into 4 globose nutlets.

A weed of open places in scrub jungles, also on roadsides; common. Fl. & Fr.: throughout the year.

Heliotropium curassavicum L. Sp. Pl. 130. 1753; FPM 630; Mayur. 189; Kazmi in J. Arnold Arbor. 51:178. 1970; Matthew & Rani 986.

Prostrate or suberect herbs. Leaves 1-4 x 0.3-0.8 cm, linear, spatulate or lanceate, glaucous. Flowers c. 2.5 mm across, white, in bifurcate terminal spike-like cymes coiled at apex; stigmas conical with bifid apex. Fruit splitting into 4 nutlets.

A weed of clayey soils, especially near seashores and backwaters; fairly common. Fl. & Fr.: January-July.

Heliotropium indicum L. Sp. Pl. 130. 1753; FBI 4:152; FPM 630; Mayur. 189; Mathew & Rani 988.

Herbs or undershrubs, up to 80 cm tall. Leaves 6-11 x 3.5-8 cm, ovate, base cuneate to subcordate or attenuate, often oblique, margin undulate. Flowers c. 3 mm across, pale blue, in long, terminal spike-like cymes coiled at apex; bracts absent. Fruits c. 4 mm across, bilobed at apex.

A weed of rubbish heaps and waste places near roadsides and railway tracks, also along sewage canals; common. Fl. & Fr.: throughout the year.

Heliotropium marifolium Retz. Obs. Bot. 2:8. 1781: FTN 2:99. *Heliotropium scabrum* Retz. Obs. Bot. 2:8. 1781; FBI 4:152; FPM 630; Mayur. 190; Matthew & Rani 989.

Prostrate or suberect herbs, up to 20 cm tall. Leaves 0.5-2 x 0.3-1 cm, ovate-lanceate to linear-lanceate, strigose. Flowers c. 2 mm across, white, solitary or in short, terminal cymes; bracts foliaceous; stigmas conical above the umbrella-like ring. Fruit splitting into 4 nutlets.

A weed of waysides and waste places; rare. Fl. & Fr.: July-January.

Heliotropium ovalifolium Forssk. Fl. Aegypt-Arab. 38. 1775; FBI 4:150; FPM 629; Mayur. 190; Kazmi 178; Matthew & Rani 989.

Prostrate or decumbent herbs; young parts white-sericeous. Leaves 1-3.5 x 0.5-1.5 cm. Flowers c. 3 mm across, white, in terminal spike-like cymes often coiled at apex; stigma elongate-conical. Fruit splitting into 4 nutlets.

A weed of drying ditches and lakes; fairly common. Fl. & Fr.: January-July.

Heliotropium supinum L. Sp. Pl. 130. 1753; FBI 4:149; FPM 629; Mayur. 189; Kazmi 179; Matthew & Rani 990.

Prostrate or decumbent herbs; young parts white-woolly. Leaves 1-2.5 x 0.5-1.5 cm, elliptic or ovate, veins impressed. Flowers c. 2 mm across, white, in terminal, simple or branched, spike-like cymes; stigma conical or cylindric with penicillate apex. Fruit splitting into 4 nutlets.

A weed of dried ditches and waste places; very rare. Fl. & Fr.: February-April.

Heliotropium zeylanicum (Burm.f.) Lam. Encycl. 3:94. 1789; FPM 630; Mayur. 189; Kazmi 156; Mathew & Rani 990. *H. curassavicum* L. var. *zeylanicum* Burm. f. Fl. Ind. 41.t.16.f.2. 1768. *H. paniculatum* R. Br. Prodr. 494. 1810; FBI 4:151.

Mayuranathan records this.

Trichodesma R.Br. (nom.cons.)

Trichodesma indicum (L.) R.Br. Prodr. 149. 1810; Brown 123; FBI 4:153; FPM 631; Mayur. 185; Kazmi in J.Arnold Arbor. 52:516. 1971; Banerjee & Pramanik in BBSI 17:110. 1978. *Borago indica* L. Sp.P1. 137. 1750.

Undershrubs, up to 60 cm tall. Leaves 3-6 x 0.5-1.3 cm, oblong to lanceate or ovate, base cordate to hastate, hispid. Flowers c. 1.2 cm across, pale violet, solitary, axillary. Fruit of 4 nutlets.

A weed of waste places along railway tracks and waysides; fairly common. Fl. & Fr.: January-April.

Trichodesma sedgwickianum Banerjee in Bull.Bot.Soc.Bengal 16:10. 1962; Banerjee & Pramanik 117. *T. amplexicaule* auct. non Roth 1821; FBI 4:153 p.p.; Sedgwick in RBSI 6:347. 1913; FPM 631; Mayur. 185.

Mayuranathan records this.

CORDIACEAE

1. Leaves over 3 cm long:

2. Styles forked once

.. ..

Ehretia

2. Styles forked twice

.. ..

Cordia

1. Leaves under 3 cm long

.. ..

Carmona

Carmona Cav.

Carmona retusa (Vahl) Masam. in Trans.Nat. Hist. Soc. Taiwan 30:61. 1940; Matthew & Rani in Matthew, Fl. Tamilnadu Carnatic 3:996. 1983. *Cordia retusa* Vahl, Symb. Bot.2:42. 1791. *Carmona microphylla* (Lam.) G. Don.Gen. Hist. 4:391. 1837; Johnston in J. Arnold Arbor. 32:17. 1951. *Ehretia microphylla* Lam. Tabl. Encycl. 1:425. 1792; FPM 626; Mayur. 187. *E. buxifolia* Roxb. Pl. Cor.t.57. 1796; FBI 4:144.

shrubs, up to 3 m tall. Leaves 1-2.5 x 0.5 - 1.5 c.m.

obovate to obvate-elliptic, coriaceous, scabrous above. Flowers c. 6 mm across, white, solitary or in axillary cymes; calyx lobes foliaceous, spatulate. Drupes c. 6 mm across, yellowish-brown when ripe.

In scrub jungles and thickets; common. Fl.: July-October. Fr.: September-February.

Fruits eaten by children.

Cordia L.

Corolla orange-red

.. ..

C. sebestena

Corolla whitish

.. ..

C. obliqua

Cordia obliqua Willd. Phytographia 4.1.4.f. 1. 1794; FBI 4:137; FPM 623; Mayur. 186; Matthew & Rani in Matthew, Fl. Tamilnadu Carnatic 3:1000. 1983.

Trees, upto 10 m tall. Leaves 4.5-9 x 3-6 cm, ovate to suborbicular or elliptic, scaberulent, often repand-crenate. Flowers c. 7 mm across, pale white, in peduncled, lax cymes. Drupes c. 1.2 cm across, ovoid, with viscid pulp.

Along roadsides and railway tracks, also in jungles; fairly common. Fl.: March-May. Fr.: April-July. Tamil: Mookkuchali pazham.

Cordia sebestena L. Sp.Pl. 190. 1753; Brown 122; FPM 625; Mayur. 186.

Shrubs or trees, upto 6 m tall. Leaves 6-14 x 5-10 cm, ovate to ovate-elliptic, scabrous. Flowers c. 2.5 cm across, in terminal cymes.

Commonly cultivated in gardens and parks as an ornamental. Fl.: throughout the year.

Cordia gharaf (Forssk.) Ehrenb. ex Asch. Sitzungsber Ges. Naturf. Freunde Berling 1879 (4):46. 1879; Kazmi in J. Arnold Arbor. 51:140. 1970. *Cornus gharaf* Forssk. Fl. Aegypt.-Arab. (Florula 95) 1775. *Cordia rothii* Roem. & Schult. Syst. Veg. 4:798. 1819; FBI 4:138; FPM 624; Mayur. 187.

Mayuranathan records this.

Ehretia P. Beauv.

Ehretia ovalifolia Wight, Ic. t.1383. 1848; FBI 4:143; FPM 626; Mayur. 187; Matthew & Rani in Matthew, Fl. Tamilnadu Carnatic 3:1002. 1983.

Shrubs or trees, upto 5 m tall. Leaves 4-6 x 2.5-4 cm, elliptic or obovate, scaberulent. Flowers c. 5 mm across, white, in terminal cymes. Drupes c. 5 mm across, red when ripe.

In scrub jungles; fairly common. Fl.: July-November. Fr.: August-March.

Ehretia pubescens Benth. in Royle, Ill. Bot.Himal.306. 1836; FPM 626; Mayur. 188; Matthew & Rani 1002. *E. laevis* Roxb. var. *pubescens* (Benth.) Clarke in Hook.f.Fl.Brit. India 4:142. 1883.

Mayuranathan records this.

CONVOLVULACEAE

- | | | |
|--------------------------------|---------|------------------|
| 1. Stems parasitic, leafless | .. .. . | <i>Cuscuta</i> |
| 1. Stems not parasitic, leafy: | | |
| 2. Styles 2: | | |
| 3. Stems erect | .. .. . | <i>Cressa</i> |
| 3. Stems prostrate | .. .. . | <i>Evolvulus</i> |
| 2. Style 1: | | |

- | | | |
|---------------------------------|---------|-------------------|
| 4. Pollen grains spinulose: | | |
| 5. Fruits fleshy when mature | .. .. . | <i>Argyreia</i> |
| 5. Fruits dry when mature: | | |
| 6. Stigmas globose or biglobose | .. .. . | <i>Ipomoea</i> |
| 6. Stigmas not as above | .. .. . | <i>Rivea</i> |
| 4. Pollen grains smooth: | | |
| 7. Stems slightly winged | .. .. . | <i>Operculina</i> |
| 7. Stems not winged: | | |
| 8. Stigmas globose or biglobose | .. .. . | <i>Merremia</i> |
| 8. Stigmas not as above | .. .. . | <i>Hewittia</i> |

Argyreia Lour.

Argyreia cymosa (Roxb.) Sweet, Hort.Brit. ed. 2:373. 1830; FBI 4:190; FPM 637; Mayur. 193; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1008. 1983. *Lettsomia cymosa* Roxb. Fl. Ind. 2:82. 1824.

Climbers. Leaves 6-10 x 4-7 cm, broadly ovate, pubescent, base cordate, apex shortly acuminate. Flowers c. 4.5 cm long, pale pink, in axillary, capitate cymes; bracts orbicular; sepals orbicular to obovate. Fruits upto 2 cm across.

In scrub jungles, on hedges and fences; fairly common. Fl. & Fr.: November-April.

Cressa L.

Cressa cretica L. Sp.Pl. 223. 1753; FBI 4:225; FPM 647; Mayur. 191; Austin in Dassan. & Fosb. Rev.Handb.Fl. Ceylon 1:304. 1980.

Herbs, upto 20 cm tall. Leaves 4-10 x 2-5 mm, ovate or ovate-lanceate, pubescent. Flowers 5-6 mm long, in axillary clusters; corolla white, deeply 5-lobed. Capsules c. 3 mm across.

A weed of salt pans, sometimes also near rice fields; rare. Fl. & Fr.: November-March.

Cuscuta L.

- | | | |
|---|---------|--------------------|
| Styles as long as or shorter than ovaries | .. .. . | <i>C.reflexa</i> |
| Styles much longer than ovaries | .. .. . | <i>C.chinensis</i> |

Cuscuta chinensis Lam. Encycl. 2:229. 1786; FBI 4:226; FPM 654; Mayur. 191; Yuncker in Mem. Torrey Bot. Club 18:209.

1932; Austin in Dassan. & Fosb. Rev. Handb.Fl. Ceylon 1:305. 1980.

Climbers; stems c. 0.4 mm in diameter, filiform, yellow. Flowers c. 3 mm long, in sessile, capitate clusters, pale yellow; corolla subglobose. Capsules circumscissile.

A weed, parasitic on *Acalypha indica*, *Datura metel*, *Ipomoea pes-caprae* etc.; rare. Fl. & Fr.: December-March.

Cuscuta reflexa Roxb. Pl. Cor.t. 104. 1798; Brown 121; FBI 4:225; FPM 654; Yuncker 259; Ooststr. in Steenis, Fl. Males. ser. 1.4:393. 1953; Austin 306.

Climbers; stems c. 2.5 mm in diameter, yellow. Flowers c. 8 mm long, creamy-white, in sessile, subglobose clusters; corolla campanulate. Capsules circumscissile.

A weed, parasitic on several hosts such as *Bougainvillea* spp., *Cassia siamea*, *Lannea coromandelica* etc.; fairly common. Fl. & Fr: December-March.

Evolvulus L.

Stems rooting at nodes	.. .. .	<i>E. nummularius</i>
Stems not rooting at nodes	.. .. .	<i>E. alsinoides</i>

Evolvulus alsinoides (L.) L. Sp.Pl. ed. 2.392. 1762; Brown 16; FBI 4:220; FPM 648; Mayur. 192; Ooststr. in Steenis, Fl. Males. ser. I. 5:395. 1958; Stearn in Taxon 21:649. 1972. *Convolvulus alsinoides* L. Sp.Pl. 157. 1753.

Prostrate herbs. Leaves 10-25 x 4-8 mm, linear-oblong to elliptic, pubescent. Flowers c. 1 cm across, blue, rarely white, usually solitary on axillary, filiform peduncles; Capsules c. 4 mm across.

A weed of open grounds; very common. Fl. & Fr.: throughout the year.

Evolvulus nummularius (L.) L. Sp. Pl. ed.2.391. 1762; Mayur. 192; Ooststr. 558; Stearn 649. *Convolvulus nummularius* L.Sp.Pl. 157. 1753.

Prostrate herbs. Leaves 6-15 x 5-13 mm, broadly ovate to suborbicular, base obtuse to subcordate. Flowers c. 7 mm across, white, axillary, solitary. Capsules c. 4 mm across.

A weed of shady places, lawns and roadsides; common. Fl.: & Fr.: throughout the year.

Hewittia Wight & Arn.

Hewittia sublobata (L.f.) Kuntze, Rev.Gen. Pl. 2:441. 1891; Ooststr. in Steenis, Fl. Males. ser. 1.4:438. 1953; Austin in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 1:312. 1980. *Convolvulus sublobatus* L.f.Suppl. Pl. 135. 1781. *Hewittia bicolor* (Vahl) Wight & Arn. in Madras J. Lit. Sci. 5:22. 1837; Brown 116; FBI 4:216; FPM 649; Mayur. 193. *Convolvulus bicolor* Vahl, Symb. Bot. 3:25. 1794 non Desr. 1791.

Trailing or climbing herbs. Leaves 4-10 x 3-8 cm, ovate, pubescent, base varying between cuneate to cordate or even hastate. Flowers c. 2.4 cm across, cream with purplish centre, axillary, solitary. Capsules c. 1 cm across.

A weed of waste places; rare, Fl. & Fr.: October-February.

Ipomoea L.

1. Corolla salverform:

- | | | |
|-------------------------------|---------|-----------------------|
| 2. Leaves pinnately dissected | .. .. . | <i>I. quamoclit</i> |
| 2. Leaves not dissected | .. .. . | <i>I. hederifolia</i> |

1. Corolla not salverform:

- | | | |
|--|---------|-----------------------------------|
| 3. Leaves obcordate at apex | .. .. . | <i>I. pes-caprae</i> |
| 3. Leaves not obcordate at apex: | | |
| 4. Stems prostrate (on land or water): | | |
| 5. Leaves deeply lobed or dissected | .. .. . | <i>I. coptica</i> |
| 5. Leaves not as above: | | |
| 6. Leaves reniform | .. .. . | <i>I. asarifolia</i> |
| 6. Leaves not reniform | .. .. . | <i>I. aquatica</i> |
| 4. Stems erect or climbing: | | |
| 7. Leaves palmately lobed: | | |
| 8. Flowers sessile or subsessile | .. .. . | <i>I. pes-tigridis</i> |
| 8. Flowers distinctly pedicellate: | | |
| 9. Leaves slightly 3-5-lobed | .. .. . | <i>I. nil</i> |
| 9. Leaves pedately 5-7-lobed | .. .. . | <i>I. cairica</i> |
| 7. Leaves not lobed: | | |
| 10. Corolla over 8 cm long | .. .. . | <i>I. carnea subsp. fistulosa</i> |
| 10. Corolla under 6 cm long: | | |
| 11. Flowers in sessile heads | .. .. . | <i>I. eriocarpa</i> |
| 11. Flowers not in sessile heads: | | |
| 12. Sepals equal, orbicular | .. .. . | <i>I. staphylina</i> |
| 12. Sepals unequal, not orbicular: | | |
| 13. Leaves acuminate at apex; | .. .. . | <i>I. obscura</i> |
| 13. Leaves obtuse to acute at apex | .. .. . | <i>I. sepiaria</i> |

Ipomoea aquatica Forssk. Fl. Aegypt.-Arab. 44. 1775; FBI 4:210; Ooststr. in Steenis, Fl. Males. ser. 1.4:473. 1953; Austin in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 1:318. 1980. *I. reptans* Poir. in Lam. Encycl. (Suppl. 3) 460. 1814 non *Convolvulus reptans* L. 1753; Brown 117; FPM 643; Mayur. 196.

Branches up to 15 m long, floating on water or creeping on mud, often rooting at nodes. Leaves 4-12 x 2-6 cm, ovate to lanceate, base hastate to cordate. Flowers c. 5 cm across, rosy-pink to almost white, in axillary cymes or solitary. Capsules up to 1 cm across.

An aquatic weed of ponds and ditches; common. Fl. & Fr.: November-April.

Leaves used as greens.

Ipomoea asarifolia (Desr.) Roem. & Schult. Syst. Veg. 4:251. 1819; Ooststr. 477; Austin 319. *Convolvulus asarifolius* Desr. in Lam. Encycl. 3:562. 1789. *Ipomoea repens* Lam. Tabl. Encycl. 1:467. 1791 non Roth 1821; FPM 643; Mayur. 196. *I. beladamboe* Roem. & Schult. Syst. Veg. 4:233. 1819; FBI 4:209.

Herbs, often rooting at nodes. Leaves 4.5-8.5 x 5-9.5 cm, reniform to suborbicular, base cordate. Flowers c. 6 cm across, rosy-purple, in axillary cymes or solitary. capsules c. 1 cm across.

A semiaquatic weed of ditches and margins of ponds; fairly common. Fl. & Fr.: December-April.

Ipomoea cairica (L.) Sweet, Hort. Brit. 287. 1827; FPM 645; Ooststr. 478; Austin 322. *Convolvulus cairicus* L. Syst. Nat. ed. 10. 922. 1759. *Ipomoea palmata* Forssk. Fl. Aegypt.-Arab. 43.1775; FBI 4:214; BICS 6.

Climbers. Leaves 3-10 cm across, palmatisect; lobes 3-5 x 1-3 cm, lanceate, ovate or elliptic. Flowers c. 5 cm across, rosy-purple, sometimes pale white with purplish centre, in axillary cymes or solitary. Capsules c. 1 cm across.

Cultivated in gardens, also runs wild on fences; rare. Fl. & Fr.: throughout the year.

Ipomoea carnea Jacq. subsp. ***fistulosa*** (Mart. ex Choisy) Austin in Taxon 26:237. 1977 & in Dassan. & Fosb.Rev.Handb. Fl. Ceylon 1:322. 1980. *I. fistulosa* Mart. ex Choisy in DC. Prodr. 9:349. 1845. *I. carnea* Jacq. Enum. Pl. Carib. 13. 1760; FPM 645; BICS 6.

Shrubs, often straggling, up to 4 m tall; stems fistular. Leaves 10-25 x 5-12 cm, ovate to ovate-lanceate, base truncate to subcordate. Flowers c. 8 cm across, rosy-purple, in axillary cymes; corolla funnelform. Capsules c. 1.5 cm across.

Cultivated as a hedge plant, propagated by cuttings, also runs wild along lakes, roadsides, railway tracks etc.; very common. Fl. & Fr.: throughout the year.

Ipomoea coptica (L.) Roth ex Roem. & Schult. Syst. Veg. 4:208. 1819; Ooststr. 479; Austin 323. *Convolvulus copticus* L. Mant. Alt. 559. 1771. *Ipomoea dissecta* Willd. Phytographia 5.t.2.f.3. 1794; FBI 4:200; FPM 645; Mayur. 198. - Plate 17 A.

Branches up to 30 cm long. Leaves 2-6 x 1.5-5 cm; lobes linear to elliptic. Flowers c. 1.2 cm across, white with purplish centre, solitary or in axillary cymes. Capsules c. 8 mm across.

A weed of moist places; rare. Fl & Fr.: December-March.

Ipomoea eriocarpa R. Br. Prodr. 484. 1810; FBI 4:204; Ooststr. 462; Austin 325. *I. hispida* (Vahl) Roem. & Schult. Syst. Veg. 4:238. 1819 non Zucc. 1809. 119; FPM 643. *Convolvulus hispidus* Vahl, Symb. Bot. 3:29. 1794. - Plate 17 B.

Climbers. Leaves 3-8 x 1.5-5 cm, ovate-lanceate, base cordate or subhastate. Flowers c. 8 mm across, pinkish-white, short-pedicellate, in sessile or short-peduncled axillary cymes. Capsules c. 6 mm across.

In thickets and on hedges; rare. Fl. & Fr.: November-March.



PLATE 17: A - Ipomoea coptica (L.) Roem. & Schult.
 B - I. eriocarpa R. Br. C & D - I. hederifolia L. -
 (twig with flowers and peduncule with fruits).
 E & F - Rivea hypocrateriformis (Desr.) Choisy -(fruits).

Ipomoea hederifolia L. Syst. Nat. ed. 10. 925. 1759; Austin 325. *I. angulata* Lam. Tabl. Encycl. 1:464. 1793; Ooststr. 481. *Quamoclit phoenicea* (Roxb.) Choisy in Mem. Soc. Phys. Geneve 6:433. 1834; Brown 119; FPM 645; Mayur. 194. *Ipomoea phoenicea* Roxb. Fl. Ind. 2:92. 1824. - Plate 17 C-D.

Climbers. Leaves 5-15 x 4-12 cm, ovate, shallowly 3-5-lobed or dentate, base cordate, apex acuminate. Flowers c. 2.5 cm across, red, in axillary, long-peduncled cymes; corolla tube up to 4.5 cm long. Capsules c. 8 mm across.

In scrub jungles and on hedges, sometimes cultivated as an ornamental; rare. Fl. & Fr.: December-March.

Ipomoea nil (L.) Roth, Catal. Bot. 1:36. 1797; Ooststr. 465; Shinn. in Taxon 14:231. 1965; Austin 332. *Convolvulus nil* L. Sp. Pl. ce. 2.219. 1762. *Ipomoea hederacea* auct. non (L.) Jacq. 1786; FBI 4:199; FPM 644; Mayur. 197.

Climbers. Leaves 5-12 x 4-11 cm, shallowly 3-5-lobed or entire, base cordate. Flowers c. 5 cm across, blue or pinkish-purple, in axillary cymes. Capsules c. 1 cm across.

In thickets and waste places along railway tracks; fairly common. Fl. & Fr.: September-March.

Ipomoea obscura (L.) Ker-Gawl. in Edward's Bot. Reg. 3 : t.239. 1817; FBI 4:207; FPM 643; Mayur. 197; Ooststr. 471; Austin 333. *Convolvulus obscurus* L. Sp. Pl. ed. 2.220. 1762.

Slender climbers. Leaves 3-7 x 2.5-6.5 cm, cordate. Flowers c. 2.5 cm across, pale white with purplish centre, solitary, axillary, rarely in cymes. Capsules c. 1 cm across.

A weed of waste places near railway tracks, also in scrub jungles; common. Fl. & Fr.: December-April.

Ipomoea pes-caprae (L.) R. Br. in Turkey, Narr. Exp. Congo, App. 477. 1818; Brown 117; FPM 644; Mayur. 197; Ooststr. 475; Austin 334. *Convolvulus pes-caprae* L. Sp. Pl. 159. 1753. *Ipomoea biloba* Forssk. Fl. Aegypt.-Arab. 44. 1775; FBI 4:212.

Trailing herbs; stems up to 25 m long, many-branched, rooting at nodes. Leaves 3-9 x 4-10 cm, obovate, glabrous. Flowers 4-6 cm across, rosy-purple, in axillary cymes or solitary. Capsules c. 1.5 cm across.

A sand-binder of seashores, also along waste places near railway tracks; common. Fl. & Fr.: throughout the year.

Ipomoea pes-tigridis L. Sp. Pl. 162. 1753; Brown 119; FBI 4:204; FPM 644; Mayur. 198; Ooststr. 467; Austin 336.

Prostrate or climbing herbs. Leaves 5-10 x 6-12 cm, digitately 7-9-lobed; lobes elliptic, ovate or obovate. Flowers c. 3 cm across, white, in long-peduncled, axillary capitate cymes. Capsules c. 8 mm across.

A weed of waste places along railway tracks and near cultivated fields; rare. Fl. & Fr.: December-March.

Ipomoea quamoclit L. Sp. Pl. 159. 1753; FBI 4:199; Ooststr. 482; BICS 3; Austin 338. *Quamoclit pinnata* Bojer, Hort. Maurit. 224. 1837; Brown 119; FPM 645; Mayur. 194.

Slender twiners. Leaves 4-8 x 2-4 cm; lobes linear-filiform. Flowers c. 2.3 cm across, dark red, in axillary cymes; corolla tube up to 3 cm long. Capsules c. 8 mm across.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: September-February. Tamil: Mayirmaanickam.

Ipomoea sepiaria Koen. ex Roxb. Fl. Ind. 2:90. 1824; FBI 4:209; FPM 643; Mayur. 197; Austin 338. *I. maxima* auct. non (L.) Sweet 1830; Ooststr. 472.

Slender climbers. Leaves 3-7 x 2-5 cm, ovate-cordate or triangular-lanceate, base hastate to truncate. Flowers c. 4 cm across, rosy-purple or pale white with purplish centre, in axillary cymes. Capsules c. 7 mm across.

In thickets and waste places; fairly common. Fl. & Fr.: throughout the year.

Ipomoea staphylina Roem. & Schult. Syst. Veg. 4:249. 1819; Brown 118; FBI 4:210; Mayur. 197; Austin 340.

Large climbers. Leaves 6-12 x 3-7 cm, ovate-lanceate or ovate-elliptic, base truncate to cordate. Flowers c. 3 cm across, rosy-purple to pale white, with purplish centre, in paniculate cymes. Capsules c. 1 cm across.

In thickets, on hedges and in other waste places; rare. Fl. & Fr.: January-March.

Ipomoea turbinata Lang. Gen. Sp. Pl. 10:1816; Gunn in Brittonia 24:163. 1972; Austin 343. *Calonyction muricatum* (L.) G. Don, Gen. Hist. 4:264. 1837; Mayur. 194. *Convolvulus muricatus* L. Mant. Pl. 44. 1767. *Ipomoea muricata* (L.) Jacq. Hort. Schoenb. 3(2):40.t.323. 1798 non Cav. 1794.

Mayuranathan records this.

***Merremia* Dcnnst. ex Endl. (nom. cons.)**

- | | | |
|--|-------|----------------------|
| 1. Leaves palmately compound | .. .. | <i>M. aegyptia</i> |
| 1. Leaves simple, sometimes palmately lobed: | | |
| 2. Flowers over 2.5 cm across | .. .. | <i>M. dissecta</i> |
| 2. Flowers under 2 cm across: | | |
| 3. Stems rooting at nodes | .. .. | <i>M. emarginata</i> |
| 3. Stems not rooting at nodes: | | |
| 4. Leaves dentate near base | .. .. | <i>M. tridentata</i> |
| 4. Leaves not dentate near base | .. .. | <i>M. hederacea</i> |

Merremia aegyptia (L.) Urb. Symb. Antill. 4:405. 1910; FPM 652; Mayur. 199; Ooststr. in Steenis, Fl. Males. ser. 1.4:448. 195. *Ipomoea aegyptia* L. Sp. Pl. 162. 1753. *I. pentaphylla* Jacq. Collectanea 2:297. 1789; FBI 4:202.

Climbers. Leaves 5-foliate; leaflets 5-8 x 1.5-3 cm, elliptic-lanceate, hirsute, margin entire. Flowers c. 2.2 cm across, white, in cymes. Capsules c. 1.5 cm across.

On hedges and in thickets; rare. Fl. & Fr.: November-March.

Merremia dissecta (Jacq.) Hall.f. in Engler, Bot. Jahrb. Syst. 16:552. 1893; FPM 652; Mayur. 199; Ooststr. 448; Austin in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:349. 1980. *Convolvulus dissectus* Jacq. Obs. Bot. 2:4.t.28.1767. *Ipomoea sinuata* Ortega, Nov. Pl. Descr. Dec. 84. 1798; FBI 4:214.

Climbers. Leaves 5-10 cm across, 7-9-partite; lobes sinuate-dentate. Flowers c. 4 cm across, pale white or pale pink with purplish centre, solitary or in axillary cymes. Capsules c. 1.8 cm across.

On hedges and fences; rare. Fl. & Fr.: November-April.

Merremia emarginata (Burm. f.) Hall.f. in Engler, Bot. Jahrb. Syst. 16:552. 1893; FPM 652; Mayur. 199; Ooststr. 444; Austin 349. *Evolvulus emarginatus* Burm.f. Fl. Ind. 77.t.30.f.1. 1768. *Ipomoea reniformis* (Roxb.) Choisy in Mem. Soc. Phys. Geneve 6:446. 1834; FBI 4:206. *Convolvulus reniformis* Roxb. Fl. Ind. 2:67. 1824.

Prostrate herbs, rooting at nodes. Leaves 0.5-2.5 x 0.3-2 cm, reniform to ovate. Flowers c. 1 cm across, yellow, solitary or in 2-3-flowered cymes. Capsules c. 5mm across.

A weed of moist places; fairly common. Fl. & Fr.: November-March. Tamil: Elikkaathu keera.

Merremia hederacea (Burm.f.) Hall.f. in Engler, Bot. Jahrb. Syst. 18:118. 1894; Ooststr. 441; Austin 350. *Evolvulus hederaceus* Burm.f. Fl. Ind. 77.t.30.f.2. 1768. *Merremia chryseides* (Ker-Gawl.) Hall.f. in Engler, Bot. Jahrb. Syst. 16:552. 1893; FPM 652; Mayur. 199. *Ipomoea chryseides* Ker-Gawl. in Edward's Bot. Reg. 4:t. 270. 1818; FBI 4:206.

Climbers. Leaves 2-5 x 1.5-4 cm, ovate to 3-lobed, base cordate or hastate. Flowers c. 1.5 cm across, yellow, in axillary cymes. Capsules c. 6 mm across.

In thickets and on hedges; rare. Fl. & Fr.: November-April.

Merremia tridentata (L.) Hall.f. in Engler, Bot. Jahrb. Syst. 16:552. 1893; FPM 652; Mayur. 199; Ooststr. 445; Austin 351. *Convolvulus tridentatus* L. Sp. Pl. 157. 1753. *Ipomoea tridentata* (L.) Roth in Roem. Arch. Bot. (Leipzig) ser. 1.2:38. 1798; FBI 4:205.

Prostrate or twining, slender herbs. Leaves 1-3 x 0.2-1 cm, oblong-lanceate, base auriculate or hastate. Flowers c. 1.2 cm across, pale yellow, often with purple centre, axillary, solitary. Capsules c. 8 mm across.

A weed of lawns, playgrounds, roadsides etc., common. Fl. & Fr.: throughout the year.

Operculina Manso

Operculina turpethum (L.) Manso, Enum. Subst. Bras. 16:49. 1836; FPM 653; Ooststr. 56; Austin 356. *Convolvulus turpethum* L. Sp. Pl. 155. 1753. *Ipomoea turpethum* (L.) R. Br. Prodr. 485. 1810; FBI 4:212. *Merremia turpethum* (L.) Shah & Bhat in J. Bombay Nat. Hist. Soc. 74:567. 1978.

Large climbers. Leaves 5-12 x 3-7 cm, ovate or ovate lanceate, base cordate. Flowers c. 5 cm across, white, in axillary cymes. Capsules c. 1.5 cm across, with accrescent calyx; pericarp transparent, brittle.

On hedges and in thickets, especially near canals and rice fields; rare. Fl. & Fr.: October-April.

Rivea Choisy

Rivea hypocrateriformis (Desr.) Choisy in Mem. Soc. Phys. Geneve 6:408. 1834; FBI 4:184; FPM 635; Mayur. 192; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1042. 1983. *Convolvulus hypocrateriformis* Desr. in Lam. Encycl. 3:561. 1792. -Plate 17 E-F.

Large climbers. Leaves 3-6 x 4-7 cm, reniform, coriaceous, base cordate. Flowers c. 4 cm across, white, fading creamy, axillary, solitary; corolla up to 7 cm long, salverform. Capsules c. 1.2 cm across, woody, late-dehiscent.

In scrub jungles and thickets; common. Leaves often with insect galls. Flowers open at dusk and fade at dawn. Fl. & Fr.: throughout the year.

SOLANACEAE

- | | | |
|---|---------|---------------------|
| 1. Fruits spiny | .. .. . | <i>Datura</i> |
| 1. Fruits not spiny | | |
| 2. Corolla tubular: | | |
| 3. Herbs; fruit a capsule | .. .. . | <i>Nicotiana</i> |
| 3. Shrubs; fruit a berry | .. .. . | <i>Cestrum</i> |
| 2. Corolla campanulate to rotate: | | |
| 4. Fruits enclosed within calyx | .. .. . | <i>Physalis</i> |
| 4. Fruits not enclosed within calyx: | | |
| 5. Anthers dehiscing by apical pores | .. .. . | <i>Solanum</i> |
| 5. Anthers dehiscing longitudinally: | | |
| 6. Leaves pinnately compound or pinnatisect | .. .. . | <i>Lycopersicon</i> |
| 6. Leaves simple and entire | .. .. . | <i>Capsicum</i> |

Capsicum L.

Capsicum annum L. Sp. Pl. 188. 1753; FPM 661; Heiser & Pickersgill in Taxon 18:278. 1969.

Herbs or undershrubs, up to 70 cm tall. Leaves 3-5 x 1.5-3 cm, ovate to ovate-lanceate. Flowers c. 1 cm across, white, solitary. Fruits up to 10 x 1.2 cm, red when ripe.

Commonly cultivated around houses and in fields. Fl. & Fr.: throughout the year.

Fruits used in culinary preparations. Tamil: Milagaai. English: Chillies.

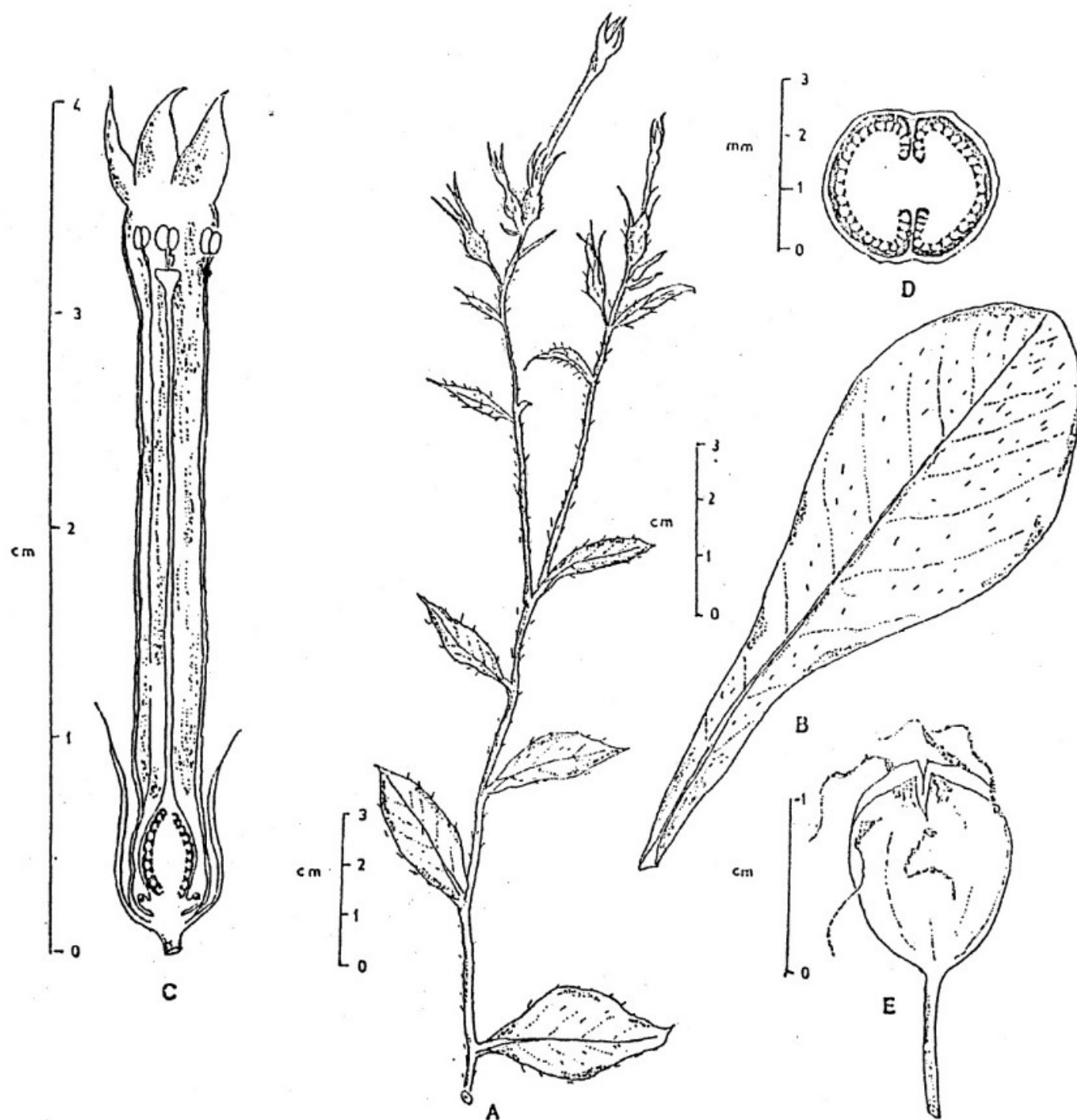


PLATE 18: *Nicotiana plumbaginifolia* Viv. A - Twig.
 B - Basal leaf. C - L.S. of flower.
 D - C.S. of ovary. E - Fruit.

Cestrum L.

Corolla lobes erect	.. .. .	<i>C. nocturnum</i>
Corolla lobes reflexed	.. .. .	<i>C. diurnum</i>

Cestrum diurnum L. Sp. Pl. 191. 1753; BICS 118; Matthew & Rani in Matthew, Fl. Tamilnadu Carnatic 3:1048. 1983.

Shrubs, up to 5 m tall. Leaves 4-7 x 1.5-3 cm, oblong-elliptic, shiny. Flowers c. 4 cm long, pale white, in terminal and axillary, subumbellate racemes. Fruits c. 9 mm across.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: November-April.

Cestrum nocturnum L. Sp. Pl. 191. 1753; Santapau in RBSI 16(1):200. 1953; BICS 119; Matthew & Rani 1050.

Shrubs, up to 4 m tall. Leaves 6-10 x 2-4 cm, oblong-ovate to elliptic. Flowers c. 4 cm long, pale white, in terminal and axillary, subumbellate racemes. Fruits c. 1 cm across.

Occasionally cultivated in gardens as an ornamental. Fl. & Fr.: November-April. English: Night Queen.

Datura L.

Leaves glabrate; corolla limb with 5 elongated processes	.. .. .	<i>D. metel</i>
Leaves tomentose; corolla limb with 10 elongated processes	.. .. .	<i>D. innoxia</i>

Datura innoxia Mill. Gard. Dict. n.5. 1768; Saff. in J. Wash. Acad. Sci. 11:179. 1921; Santapau in JBNHS 47:659. 1948 & RBSI ed. 3.16:174. 1967. *D. metel* auct. non L. 1753; FBI 4:243; FPM 660; Mayur. 201.

Undershrubs, up to 80 cm tall. Leaves 8-13 x 6-9 cm, ovate to ovate-lanceate, base oblique, margin broadly dentate to undulate. Flowers c. 8 cm across, white, solitary; corolla c. 10 cm long, funnelform. Capsules c. 4 cm across.

A weed of roadsides, railway tracks, graveyards and other waste places; common. Fl. & Fr.: October-April. Tamil: Oomatthai.

Datura metel L. Sp. Pl. 179. 1753; FTN 2:113. *D. fastuosa* L. Syst. Nat. ed.2.10. 932. 1759; FPM 660. *D. fastuosa* L. var *alba* (Nees) Clarke in Hook.f. Fl. Brit. India 4:243. 1883; FPM 660; Mayur. 200. *D. alba* Nees in Trans. Linn. Soc. London 17:1837.

Undershrubs, up to 1 m tall. Leaves 8-13 x 6-10 cm, ovate, base oblique, margin sinuate to broadly toothed. Flowers 4-7 cm across, white to purplish, solitary; corolla c. 11 cm long. Capsules c. 4 cm across.

A weed of roadsides, railway tracks and other waste places; common. Fl. & Fr.: November-May. Tamil: Oomathai.

Lycopersicon Mill.

Lycopersicon esculentum Mill. Gard. Dict. ed.8.n.2. 1768; Brown 128; FBI 4:237; FPM 661; Mayur. 204; Santapau in RBSI ed.3. 16:175. 1967. *Lycopersicon lycopersicum* (L.) Karsten, Deutsch. Fl. 966. 1885; Deb in J. Econ. Tax. Bot. 1:41. 1980. *Solanum lycopersicum* L. Sp. Pl. 185. 1753.

Scandent herbs. Leaves 10-20 x 4-10 cm, pubescent; leaflets or leaf lobes ovate to oblong, irregularly toothed. Flowers c. 1.8 cm across, yellow. Berries up to 6 cm across, red when ripe.

Commonly cultivated in fields and kitchen garden Fl. & Fr.: November-April.

Fruits edible. Tamil: Thakkaali. English: Tomato.

Nicotiana L.

Nicotiana plumbaginifolia Viv. Elench. Pl. Hort. Dinegro 26. t.5.1802; FBI 4:246; Mayur. 201; Goodsp. *Nicotiana* 403.1954. — Plate 18.

Herbs, up to 80 cm tall. Leaves varying in size and shape; radical leaves up to 15 x 5 cm, oblanceate-spatulate, cauline leaves become gradually smaller, elliptic to linear-lanceate. Flowers c. 7 mm across, pinkish-white, in terminal racemes; corolla c. 5 cm long, tubular. Capsules c. 10 x 6 mm.

A weed of shady places near gardens and buildings; rare. Fl. & Fr.: September-March.

Nicotiana tabacum L. Sp. Pl. 180. 1753; Brown 128; FBI 4:245; FPM 661; Mayur. 201; Goodsp. 372; Santapau in RBSI ed. 3.16:176. 1967.

Mayuranathan records this, perhaps cultivated. English: Tobacco. Tamil: Puhayilai.

Physalis L.

Physalis minima L. Sp. Pl. 183. 1753; FBI 4:238; FPM 659; Mayur. 204; Santapau in RBSI ed.3.16:174. 1967. — Plate 19 A-B.

Spreading or erect herbs, up to 30 cm tall. Leaves 3-7 x 2-5.5 cm, ovate-lanceate, dentate to subentire. Flowers c. 6 mm across, pale yellow, solitary. Berries c. 9 mm across; fruiting calyx c. 2.2 x 1.8 cm, ovoid, 10-nerved, depressed at base.

A weed of open fields and waste places; common. Fl. & Fr.: throughout the year. Tamil: Thol Thakkaali.

Solanum L.

- | | | |
|----------------------------------|---------|----------------------|
| 1. Climbers | .. .. . | <i>S. trilobatum</i> |
| 1. Herbs, undershrubs or shrubs: | | |
| 2. Corolla white: | | |
| 3. Armed shrubs | .. .. . | <i>S. torvum</i> |

- | | | |
|---------------------------------|---------|--|
| 3. Unarmed herbs | .. .. . | <i>S. americanum</i> |
| 2. Corolla violet or pale blue: | | |
| 4. Stems prostrate | .. .. . | <i>S. virginianum</i> |
| 4. Stems erect: | | |
| 5. Fruits over 3 cm broad | | <i>S. melongena</i> var.
<i>melongena</i> |
| 5. Fruits under 2 cm broad | | <i>S. melongena</i> var.
<i>incanum</i> |

Solanum americanum Mill. Gard. Dict. ed.8. No.5.1768; Edmonds in Kew Bull. 27:103. 1972.
S. Nigrum auct. non L. 1753; FBI 4:229; FPM 657; Mayur. 202.

Herbs, up to 60 cm tall. Leaves 4-8 x 2-5 cm, ovate, entire or sinuate. Flowers c. 7 mm across, white, in lateral cymes. Berries c. 6 mm across, brownish to black when ripe.

Commonly cultivated in fields and kitchen gardens, also runs wild. Fl. & Fr.: August-April.

Leaves used as greens. Ripe fruits edible. Tamil: Manattakkaali.

Solanum melongena L. var. *incanum* L. Mant. Pl. 46. 1767.

Undershrubs, up to 60 cm tall. Leaves 4-9 x 2-4 cm, ovate to ovate-oblong, sinuate to pinnately lobed. Flowers c. 1.8 cm across, violet, in lateral cymes. Berries c. 2 cm across.

A weed of waste places; rare. Fl. & Fr.: October-March.

Solanum melongena L. Sp.Pl.186. 1753 var. *melongena*; FBI 4:235; FPM 658; Mayur. 203.

Undershrubs, often prickly, up to 60 cm tall. Leaves 5-15 x 3-9 cm, ovate to ovate-oblong, sinuate or lobed, grey-tomentose. Flowers c. 2 cm across, violet or pale blue, in cymes. Berries globose or cylindrical, greenish or purplish.

Commonly cultivated in fields and kitchen gardens. Fl. & Fr.: September-April.

Fruits used as vegetable. Tamil: Katthiri. English: Brinjal.

Solanum virginianum L.Sp.Pl.187. 1753; Hepper in Dassan. & Fosb. Rev.Handb.Fl.Ceylon 6:375. 1987. *S. xanthocarpum* Schrad. & Wendl. Sert. Hannov. 1:8t.2. 1795; FBI 4:236; FPM 658; Mayur. 203.

Prickly undershrubs. Leaves 5-10 x 3-8 cm, ovate to elliptic, pinnately lobed. Flowers c. 2.3 cm across, pale blue or violet, in lateral cymes. Berries up to 2 cm across, subglobose, yellow when ripe.

A weed of sandy seashores and other waste places; fairly common. Fl. & Fr.: September-April.

Tamil: Kandankatthiri.

Solanum torvum Sw. Nov.Gen. Sp.47.1788; Brown 127; FBI 4:234; FPM 658; Mayur. 203; Santapau in JBNIIS 47(4):654. 1948.

Shrubs, up to 2 m tall; twigs prickly. Leaves 10-30 x 6-18 cm, sinuate to pinnately lobed, white-tomentose beneath. Flowers c. 2 cm across, in lateral cymes. Berries c. 1 cm across.

Commonly cultivated around houses, also runs wild. Fl. & Fr.: throughout the year.

Fruits used as vegetable. Tamil: Sundaikkai.

Solanum trilobatum L.Sp.Pl.188. 1753; Brown 127; FBI 4:236; FPM 659; Mayur. 203.

Prickly climbers. Leaves 2-5 x 1-3.5 cm, ovate to ovate-oblong, sinuate to lobed. Flowers c. 2 cm across, violet, in lateral cymes. Berries c. 1.2 cm across.

In scrub jungles, on fences and hedges; common. Fl. & Fr.: October-April.

Solanum anguivi Lam. Tabl. Encycl. 2:23. 1794; Hepper in Bot. J.Linn. Soc. 76:290. 1978. *S. indicum* auct. non L.1753; FBI 4:234; FPM 658; Mayur. 203.

Mayuranathan records this.

Solanum seaforthianum Anders. Bot. Repos. 8:t.504. 1808; Mayur. 203; BICS 127.

Mayuranathan records this, cultivated.

SCROPHULARIACEAE

- | | | |
|--|-------|---------------------|
| 1. Plants heterophyllous: | | |
| 2. Upper leaves linear-subulate | .. .. | <i>Sopubia</i> |
| 2. Upper leaves not linear-subulate | .. .. | <i>Limnophilla</i> |
| 1. Plants not heterophyllous: | | |
| 3. Calyx spathaceous | .. .. | <i>Centranthera</i> |
| 3. Calyx not spathaceous: | | |
| 4. Stems and leaves purplish-red | .. .. | <i>Striga</i> p.p. |
| 4. Stems and leaves greenish: | | |
| 5. Leaves linear-subulate: | | |
| 6. Stems prostrate, filiform, rooting at nodes | .. .. | <i>Glossostigma</i> |
| 6. Stems erect, not filiform, not rooting at nodes | .. .. | <i>Striga</i> p.p. |
| 5. Leaves other than linear-subulate: | | |
| 7. Plants aromatic | .. .. | <i>Stemodia</i> |
| 7. Plants not aromatic: | | |
| 8. Corolla rotate | .. .. | <i>Scoparia</i> |
| 8. Corolla not rotate | .. .. | <i>Scoparia</i> |
| 9. Calyx lobes equal: | | |
| 10. Leaves radical and cauline; stems succulent | .. .. | <i>Dopatrium</i> |
| 10. Leaves cauline; stems not succulent | .. .. | <i>Lindernia</i> |
| 9. Calyx lobes unequal | .. .. | <i>Bacopa</i> |

Bacopa Aubl. (*nom.cons.*)

- | | | |
|---------------------------|-------|----------------------|
| Stems erect | .. .. | <i>B. floribunda</i> |
| Stems prostrate or decurr | .. .. | <i>B. monnieri</i> |

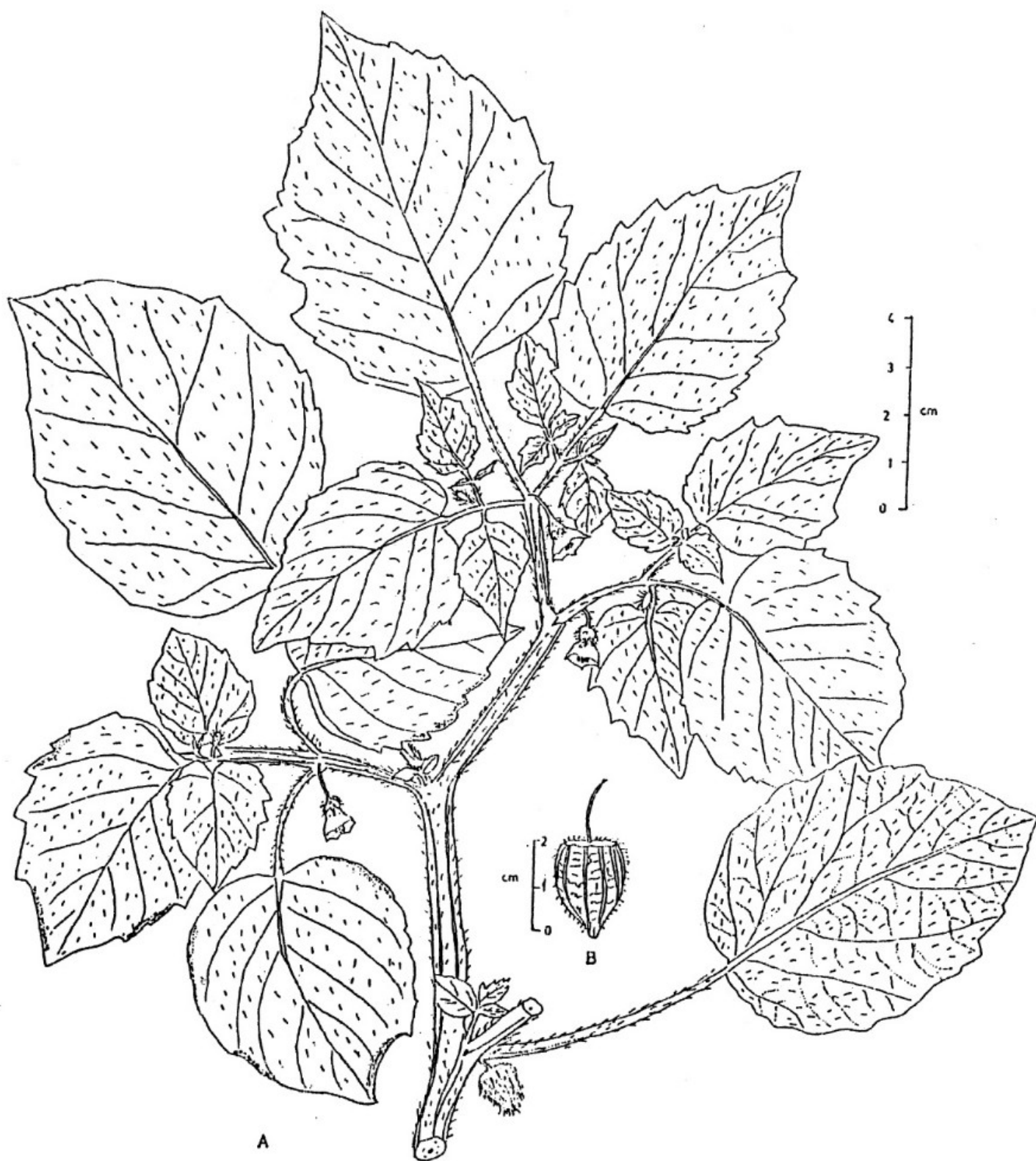


PLATE 19: *Physalis minima* L. A - Twig. B - Fruit.

Bacopa floribunda (R.Br.) Wettst. in Engler & Prantl, Pflanzenf. 4(3b):77. 1891; Santapau in JBNHS 49:31. 1950; Cramer in Dassan. & Fosb. Rev.Handb. Fl.Ceylon 3:422. 1981. *Herpestis floribunda* R.Br. Prodr. 442. 1810; FBI 4:273. *Monniera floribunda* (R.Br.) Kuntze, Rev. Gen.Pl. 463. 1891; FPM 669; Mayur. 206.

Herbs, up to 20 cm tall; stems 4-angled. Leaves 15-30 x 3-5 mm, linear-lanceate. Flowers c. 6 mm long, white, axillary. Capsules c. 3 mm across, globose.

A weed of rice fields and other moist places; rare. Fl. & Fr.: December-April.

Bacopa monnieri (L.) Pennell in Proc. Acad. Nat.Sci. Philadelphia 98:94. 1946; Santapau 30; Cramer 421. *Lysimachia monnieri* L. in Torner, Cent. Pl. 2:9. 1756. *Herpestis monniera* (L.) Benth. Scroph. Ind. 30. 1835; FBI 4:272. *Monniera cuneifolia* Michx. Fl. Bor. Amer. 2:22. 1803; FPM 669; Mayur. 205.

Stems rooting at lower nodes. Leaves 9-20 x 3-7 mm, oblong-elliptic to ovate-oblong, glabrous, succulent. Flowers c. 1 cm long, pale blue, axillary. Capsules up to 4 x 2 mm, ovoid.

A weed of rice fields and other moist places, also along sewage water; common. Fl. & Fr.: throughout the year.

Centranthera R.Br.

Centranthera tranquebarica (Spreng.) Merr. 150th Anniv. Vol.Roy.Bot. Gard. Calcutta 55.1941; Cramer in Dassan. & Fosb. Rev.Handb.Fl.Ceylon 3:397. 1981. *Razumovia tranquebarica* Spreng. Mant. Fl.Hal. 45. 1807. *Centranthera humifusa* Wall. ex Benth. Scroph. Ind. 50. 1835; FBI 4:301; FPM 683; Barnes 27.

Decumbent herbs, up to 12 cm long. Leaves 1-2.5 x 0.2-0.3 cm, opposite or alternate, linear. Flowers c. 1 cm long, brownish-yellow, axillary. Capsules ovoid.

A weed of moist places near lakes and ditches; rare. Fl. & Fr.: December-March.

Dopatrium Buch.-Ham. ex Benth.

- | | | |
|---|---------|-----------------------|
| 1. Fruiting pedicels reflexed | .. .. . | <i>D. nudicaule</i> |
| 1. Fruiting pedicels erect or horizontal: | | |
| 2. Corolla under 6 mm long; fruiting pedicels erect | .. .. . | <i>D. junceum</i> |
| 2. Corolla over 8 mm long; fruiting pedicels horizontal | .. .. . | <i>D. lobelioides</i> |

Dopatrium junceum (Roxb.) Buch.-Ham.ex Benth. Scroph. Ind. 31. 1835; FBI 4:274; FPM 670; Mayur. 209; Cramer in Dassan. & Fosb. Rev.Handb.Fl.Ceylon 3:424. 1981. *Gratiola juncea* Roxb. Pl.Cor. 2:16.t.127. 1798.

Glabrous succulent herbs, up to 25 cm tall. Leaves 5-15 x 2-5 mm, ovate-oblong to obovate-oblong. Flowers c. 5 mm long, blue, in terminal racemes. Capsules up to 4 x 3 mm, ellipsoid.

A weed of wetlands, rice fields, near lakes etc.; rare. Fl. & Fr.: November-March.

Dopatrium lobelioides (Retz.) Benth. Scroph. Ind. 31. 1835; FBI 4:274; FPM 670; Mayur. 209; Cramer 425. *Gratiola lobelioides* Retz. Obs. Bot. 4:7. 1786.

Glabrous succulent herbs, up to 40 cm tall. Leaves 7-40 x 5-15 mm, radical leaves crowded, larger; cauline leaves opposite, distant, smaller, oblong to oblong-lanceate. Flowers c. 1 cm long, blue, in simple or branched terminal racemes. Capsules up to 4 x 3 mm, globose.

A weed of wetlands, rice fields and near lakes; rare. Fl. & Fr.: November-March.

Dopatrium nudicaule (Willd.) Benth. Scroph. Ind. 31. 1835; FBI 4:274; FPM 669; Mayur. 209; Cramer 423. *Gratiola nudicaulis* Willd. in Ges. Naturf. Freunde Berlin Neue Schriften 4:193. 1803.

Glabrous succulent herbs, up to 12 cm tall; stems branched at base. Leaves 2-8 x 1-4 mm, ovate-oblong, mostly crowded below. Flowers c. 6 mm long, blue, in terminal racemes. Capsules c. 3 mm across.

A weed of rice fields and other marshy places, often associated with species of *Eriocaulon*, *Lindernia* and *Drosera*; common. Fl. & Fr.: November-March.

Glossostigma Wight & Arn. ex Arn. (*nom.cons.*)

Glossostigma diandra (L.) Kuntze, Rev. Gen. Pl. 2:461. 1891; Chev. in Bull. Mus. Hist. Nat. Paris, ser. 2:4:587. 1932. *Limosella diandra* L. Mant. Alt. 252. 1771. *Glossostigma spathulatum* (Hook.) Arn. Nov. Actum Acad. Caes. Leop.-Carol. German. Nat. Cur. 18:355. 1836; FBI 4:288; FPM 677. *Microcarpaea spathulatum* Hook. Bot. Misc. 2:101. 1831.

Many-branched, glabrous herbs; stems white, much inter-woven. Leaves 10-15 x 0.7-1 mm, subulate. Flowers c. 1 mm across, pale white, axillary, solitary, on filiform pedicels. Capsules c. 1 mm across.

An aquatic weed of fresh-water lakes, forming a green carpet along shallow water; fairly common. Fl. & Fr.: February-March.

Limnophila R.Br. (*nom.cons.*)

- | | | |
|--|---------|-----------------------|
| 1. Flowers sessile | .. .. . | <i>L. polystachya</i> |
| 1. Flowers pedicellate: | | |
| 2. Corolla cream-coloured, under 8 mm across | .. .. . | <i>L. indica</i> |
| 2. Corolla pale purple, over 10 mm across | .. .. . | <i>L. aquatica</i> |

Limnophila aquatica (Roxb.) Alston in Ann. Roy. Bot. Gard. Peradeniya 11:205. 1929; Philcox in Kew Bull. 24:129. 1970; Cramer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:431. 1981. *Cyrtilla aquatica* Roxb. Pl. Cor. 2:47. 189. 1798. *Limnophila racemosa* Benth. Scroph. Ind. 26. 1835; FBI 4:271; FPM 668; Barnes 24.

Aromatic herbs; stems up to 50 cm long, rooting at lower nodes. Leaves whorled; lower leaves much dissected; upper leaves 2-5 x 0.5-1.2 cm, ovate-elliptic to ovate lanceate, 3-5-nerved, base amplexicaul. Flowers c. 1 cm long, pale purple, in terminal racemes. Capsules up to 4 x 3 mm, subglobose.

An aquatic weed of lakes and ditches; fairly common. Fl. & Fr.: November - March.

Limnophila indica (L.) Druce in Bot. Exch. Club. Soc. Brit. Isles 3:420. 1914; Philcox 115; Cramer 432. *Hottonia indica* L. Syst. Nat.ed. 10:919. 1759. *Limnophila gratioloides* R. Br. Prodr. 442. 1810; Brown 132; FBI 4:271; FPM 668; Mayur. 208.

Aromatic herbs; stems rooting at lower nodes. Leaves opposite or whorled; submerged leaves much dissected; aerial leaves 7-25 x 2-5 mm, linear-lanceate to spatulate-elliptic, serrulate. Flowers c. 7 mm long, usually in terminal racemes. Capsules up to 5 x 3 mm.

A weed of lakes and ponds, also in drying ditches and other marshy places; common. Fl. & Fr.: December-March.

Limnophila polystachya Benth. Scroph. Ind. 26. 1835; FBI 4:269; FPM 668; Barnes 25; Philcox 131; Cramer 432. *L. aquatica* (Willd.) Santapau in J. Bombay Nat. Hist.Soc. 49:33. 1950 non (Roxb.) Alston 1929. *Stemodia aquatica* Willd. Sp.Pl. 3:346. 1801.

Aromatic herbs; stems up to 30 cm long. Leaves opposite or whorled; lower leaves much dissected, upper leaves 2-5 x 0.6-2 cm, lanceate or oblanceate, serrulate. Flowers c. 8 mm long, white, in terminal and axillary, often branched spikes. Capsules subglobose.

A weed of rice fields, ditches and ponds; very rare. Fl. & Fr.: December-March.

Lindernia All.

1. Fertile stamens 2:

2. Capsules linear:

3. Leaves sharply dentate

.. .. . *L. ciliata*

3. Leaves crenate-serrate:

4. Stems prostrate

.. .. . *L. antipoda*

4. Stems erect

.. .. . *L. oppositifolia*

2. Capsules ovoid to subglobose:

5. Capsules as long as calyx

.. .. . *L. minima*

5. Capsules longer than calyx

.. .. . *L. parviflora*

1. Fertile stamens 4

.. .. . *L. crustacea*

Lindernia antipoda (L.) Alston in Trimen, Handb. Fl.Ceylon 6 (Suppl.):214. 1931; Philcox in Kew Bull. 17:484. 1964 & 22:57. 1968; Cramer in Dassan. & Fosb.Rev.Handb.Fl.Ceylon 3:413. 1981; Sivarajan & Mathew in JBNIIS 80 (1):133. 1983. *Ruellia antipoda* L. Sp.Pl.635. 1753. *Bonnaya veronicifolia* (Retz.) Spreng. Syst. Veg.ed. 16:1:41. 1824; FBI 4:285. *Gratiola veronicifolia* Retz. Obs.Bot. 4:8. 1786-1787. *Ilysanthes veronicifolia* (Retz.) Urb. in Ber.Ges. 2:436. 1884; FPM 675; Mayur. 210.

Prostrate herbs, rooting at nodes; stems up to 20 cm long. Leaves 5-25 x 2-12 mm, ovate-oblong to obovate-oblong, serrate. Flowers c. 1 cm long, blue, axillary, appearing racemose above. Capsules up to 12 x 2 mm.

A weed of rice fields and moist places; rare. Fl. & Fr.: November-March.

Lindernia ciliata (Colsm.) Pennell in Brittonia 2:182. 1936; Mukherjee in JIBS 24:133. 1945; Philcox 22:51; Cramer 412; Sivarajan & Mathew 133. *Gratiola ciliata* Colsm. Prodr. Descr. Gratiol. 14.1793. *Ilysanthes serrata* (Roxb.) Urb. in Ber. Deutsch. Bot. Ges. 2:436. 1884; FPM 675; Barnes 25. *Gratiola serrata* Roxb. Fl. Ind. 1:140. 1820. *Bonnaya brachiata* Link & Otto, Icon. Pl. Select. 25.t.11. 1820; FBI 4:284. - Plate 20 A-B.

Herbs, up to 10 cm tall. Leaves 5-27 x 3-10 mm, oblong-lanceate or ovate-oblong, glabrous, lateral veins inconspicuous. Flowers c. 4 mm long, pale white, often with purplish lines within, axillary, solitary or in terminal racemes. Capsules up to 15 x 2 mm.

A weed of moist and marshy places; common. Fl. & Fr.: November-February.

Lindernia crustacea (L.) F.v. Muell. Syst. Census Austral. Pl. 97. 1882; Mukherjee 130; Philcox 22:17; Cramer 407; Sivarajan & Mathew 136. *Capraria crustacea* L. Mant. Pl. 87. 1767. *Vandellia crustacea* (L.) Benth. Scroph. Ind. 35. 1835; FBI 4:279; FPM 673; Mayur. 208. - Plate 20 C-D.

Prostrate to erect herbs, up to 12 cm tall. Leaves 5-25 x 3-15 mm, ovate to ovate-cordate, crenate-serrulate. Flowers c. 5 mm long, blue, axillary. Capsules up to 5 x 3 mm.

A weed of moist and marshy places, rice fields etc.; common. Fl. & Fr.: November-April.

Lindernia minima (Benth.) Mukherjee in J. Indian Bot. Soc. 24:132. 1945; Sivarajan & Mathew 135. *Ilysanthes minima* Benth. in DC. Prodr. 10:420. 1846; FBI 4:284; FPM 675; Mayur. 210. - Plate 20 E.

Herbs, up to 10 cm tall; stems 4-angled, sparsely glandular-pubescent. Leaves 6-10 x 3-6 mm, ovate. Flowers c. 8 mm across, blue or cream-coloured, extra-axillary.

A weed of marshy and moist places; rare. Fl. & Fr.: November-March.

Lindernia oppositifolia (Retz.) Mukherjee in J. Indian Bot. Soc. 24:134. 1945; Sivarajan & Mathew 134. *Gratiola oppositifolia* Retz. Obs. Bot. 4:8. 1786-1787. *Bonnaya oppositifolia* (Retz.) Spreng. Syst. Veg. ed. 16. 1:41. 1824; FBI 4:286. *Ilysanthes oppositifolia* (Retz.) Urb. Ber. Deutsch. Bot. Ges. 2:435. 1884; FPM 676; Mayur. 210. - Plate 20 F.

Herbs, up to 12 cm tall. Leaves 15-30 x 3-6 mm, linear-lanceate to oblong-elliptic, crenate-serrate. Flowers c. 7 mm long, pale purple, in terminal racemes. Capsules up to 1 x 0.2 mm.

A weed of rice fields and other marshy places; rare. Fl. & Fr.: December-April.

Lindernia parviflora (Roxb.) Haines, Bot. Bihar Orissa 2:635. 1922; Sivarajan & Mathew 135. *Gratiola parviflora* Roxb. Pl. Cor. 1:203. 1811. *Ilysanthes parviflora* (Roxb.) Benth. in DC. Prodr. 10:419. 1846; FBI 4:283; FPM 675; Mayur. 210. - Plate 20 G.

Herbs, up to 15 cm tall; stems 4-angled. Leaves 10-15 x 4-6 mm, ovate-lanceate, entire to serrulate. Flowers c. 4 mm across, solitary, axillary; pedicels reflexed in fruits; corolla c. 6 mm long. Capsules c. 3 mm across.

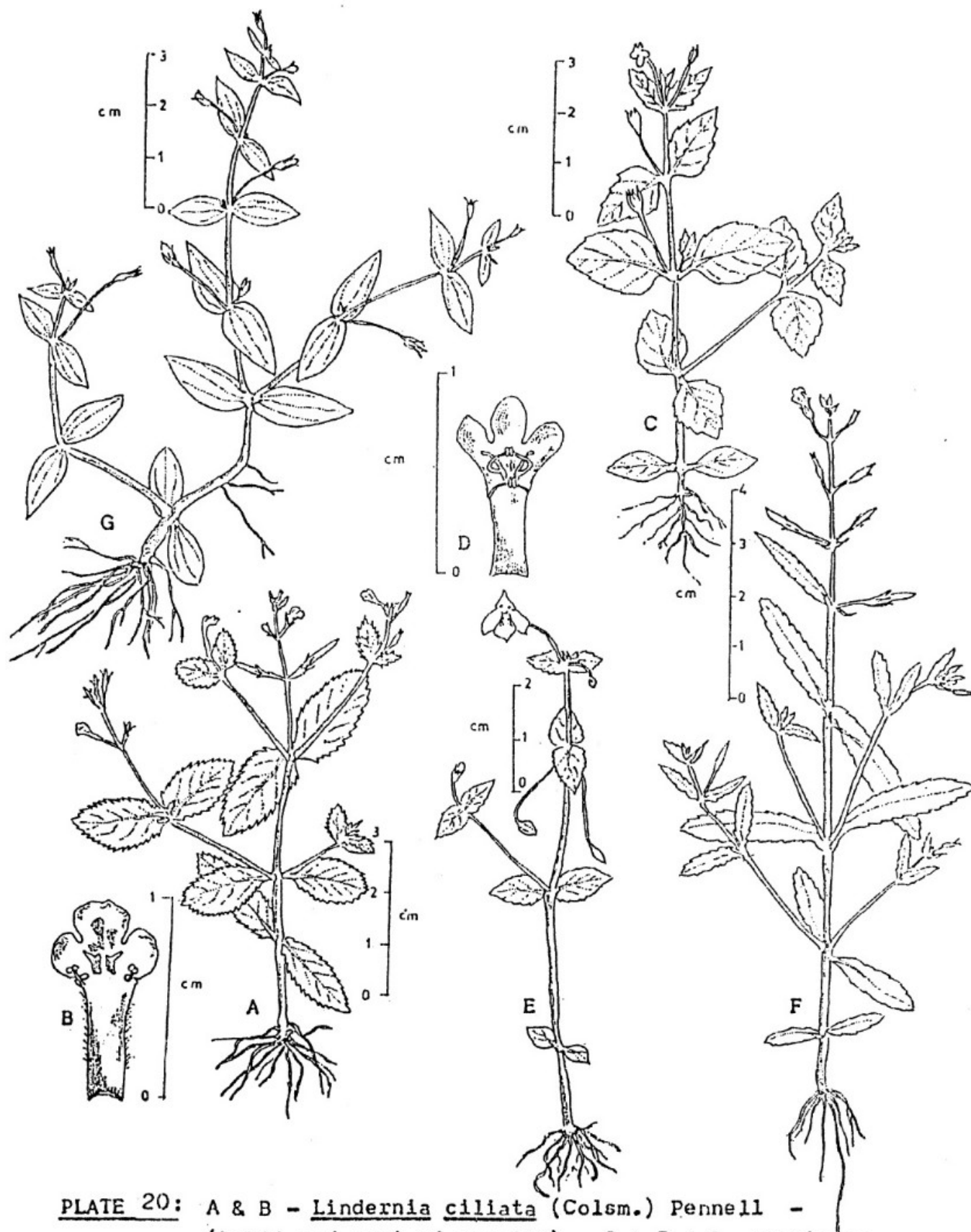


PLATE 20: A & B - *Lindernia ciliata* (Colsm.) Pennell - (habit and part of corolla). C & D - *L. crustacea* F.v.Muell. (habit and part of corolla). E - *L. minima* (Benth.) Mukherjee F - *L. oppositifolia* (Retz.) Mukherjee G - *L. parviflora* (Roxb.) Haines

A weed of rice fields and other marshy places; common. Fl. & Fr.: December-April.

Lindernia hyssopioides (L.) Haines, Bot. Bihar Orissa 2:635. 1922; Mukherjee 132; Philcox 22:50; Cramer 414; Sivarajan & Mathew 136. *Gratiola hyssopioides* L. Mant. Alt. 174. 1771. *Ilysanthes hyssopioides* (L.) Benth. in DC. Prodr. 10:419. 1846; FBI 4:283; FPM 675; Barnes 25.

Barnes records this.

Scoparia L.

Scoparia dulcis L. Sp. Pl. 116. 1753; FBI 4:289; FPM 678; Mayur. 206; Cramer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:439. 1981.

Herbs, up to 50 cm tall. Leaves 2-4 x 0.6-1.5 cm, whorled, obovate-elliptic or oblanceate, crenate-serrate. Flowers c. 7 mm across, white, axillary, solitary; corolla densely hairy above. Capsules subglobose.

A weed of waste places; fairly common. Fl. & Fr.: throughout the year.

Scopubia Ham. ex. D.Don.

Sopubia delphinifolia (L.) G. Don, Gen. Syst. 4:560. 1837; FBI 4:302; FPM 682; Mayur. 208; Cramer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:394. 1981. *Gerardia delphinifolia* L. in Torner, Cent. Pl. 2:21. 1756.

Herbs, somewhat woody at base, up to 70 cm tall. Leaves 2-5 x 0.1-0.2 cm, lower leaves opposite and often pinnatisect, the upper leaves alternate and filiform. Flowers c. 1.5 cm long, pinkish, solitary, axillary, appearing racemose above. Capsules up to 6 x 3 mm.

A weed of moist and marshy places, often associated with *Osbeckia zeylanica*, *Lindernia* spp. etc., Tambaram. rare. Fl. & Fr.: December-March.

Stemodia L. (nom. cons).

Stemodia viscosa Roxb. Pl. Cor. t. 163. 1802 & Fl. Ind. 3:94. 1832; FBI 4:265; FPM 666; Mayur. 207; Cramer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:419. 1981.

Herbs, up to 20 cm tall; stems somewhat woody below. Leaves 5-25 x 3-15 mm, opposite or whorled, ovate-oblong, glandular-pubescent, serrate, base amplexicaul. Flowers c. 1 cm long, blue, axillary, solitary. Capsules 2-4-valved.

A weed of rice fields; fairly common. Fl. & Fr.: January-March.

Striga Lour.

- | | | |
|---|---------|------------------------|
| 1. Stems and leaves purplish-red | .. .. . | <i>S. gesnerioides</i> |
| 1. Stems and leaves greenish: | | |
| 2. Calyx 4-5-ribbed | .. .. . | <i>S. densiflora</i> |
| 2. Calyx 10-or more-ribbed: | | |
| 3. Secondary ribs ending at the sinuses between calyx lobes | .. .. . | <i>S. asiatica</i> |
| 3. Secondary ribs ending at the apices of calyx lobes | .. .. . | <i>S. angustifolia</i> |

Striga angustifolia (D. Don) Saldanha in Bull. Bot. Surv. India 5(1):70. 1963; Cramer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:401. 1981. *Buchnera angustifolia* D. Don, Prodr. Fl. Nepal. 91. 1825. *Striga euphrasiodies* (Benth). Benth. in Hook. Comp. Bot. Mag. 1:364. 1864. 1836; FBI 4:299; FPM 680; Mayur. 207. *Buchnera euphrasiodies* Benth. Scroph. Ind. 41. 1835 non Vahl 1794.

Herbs, up to 20 cm tall. Leaves 8-20 x 1-2 mm, linear, scabrous. Flowers c. 1.5 cm long, white, solitary, axillary, spicate above; calyx 15-ribbed. Capsules up to 5 x 3 mm.

A weed of open, moist places, parasitic on the roots of several species of grasses; common. Fl. & Fr.: November-March.

Striga asiatica (L.) Kuntze, Rev. Gen. Pl. 2:466. 1891; FTN 2:126. *Buchnera asiatica* L. Sp. Pl. 630. 1753. *Striga lutea* Lour Fl. Cochinch. 22.1790; FPM 680; Mayur. 207.

Herbs, up to 25 cm tall. Leaves 10-35 x 1-3 mm, scabrous. Flowers c. 1.7 cm long, pale yellow or white, axillary, solitary, appearing spicate above. Capsules up to 5 x 2 mm.

A weed of rice fields, parasitic on the roots of *Oryza sativa*; rare. Fl. & Fr.: November-March.

Striga densiflora (Benth.) Benth. in Comp. Bot. Mag. 1:363. 1836; FBI 4:299; FPM 680; Mayur. 207; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1105. 1983. *Buchnera densiflora* Benth. Scroph. Ind. 41. 1835.

Herbs, up to 10 cm tall; stems 4-angled. Leaves 6-18 x 1-2 mm, scabrous. Flowers c. 1.2 cm long, white, solitary, axillary, spicate above. Capsules up to 5 x 3 mm.

A weed of moist and marshy places, parasitic on the roots of grasses; rare. Fl. & Fr.: December-March.

Striga gesnerioides (Willd.) Vatke, Oesterr. Bot. Zeit. 25:11. 1875; Cramer 399. *Buchnera gesnerioides* Willd. Sp. Pl. 3:388. 1800. *Striga orobanchioides* (R. Br. ex Endl.) Benth. in Hook. Comp. Bot. Mag. 1:36. t. 19. 1836; FBI 4:299; FPM 680; Barnes 26. *Buchnera orobanchioides* R. Br. ex Endl. Flora 15:388. t. 2. 1832.

Herbs, up to 20 cm tall. Leaves 3-4 x 2-3 mm, alternate, scaly. Flowers c. 1.2 cm long, pinkish-white, axillary, solitary, appearing spicate above. Capsules up to 7 x 3 mm.

A weed of scrub jungles, parasitic on the roots of *Lepidagathis cristata*, very rare. Fl. & Fr.: December-March.

Striga masuria Benth. in Hook. Comp. Bot. Mag. 1:364. 1836; FBI 4:300; FPM 680; Mayur. 207.

Mayuranathan records this.

LENTIBULARIACEAE

Utricularia L.

- | | | |
|------------------------------------|---------|------------------------|
| 1. Plants floating on water: | | |
| 2. Peduncles with spongy floats | .. .. . | <i>U. stellaris</i> |
| 2. Peduncles without spongy floats | .. .. . | <i>U. aurea</i> |
| 1. Plants terrestrial: | | |
| 3. Bracts medifixed | .. .. . | <i>U. caerulea</i> |
| 3. Bracts basifixed | .. .. . | <i>U. polygaloides</i> |

Utricularia aurea Lour. Fl. Cochinch. 26. 1790; Taylor in Steenis, Fl. Males. ser. 1.8:296. 1977. *U. flexuosa* Vahl, Enum. Pl. 1:198. 1804; FBI 4:329; FPM 689; Mayur. 211.

Stolons up to 70 cm long. Leaves 4 at each node, dissected, with numerous traps. Scapes up to 12 cm long, emerging above water. Flowers c. 1 cm across, pale yellow; pedicels recurved in fruits. Capsules c. 4 mm across, sub-globose, beaked at apex.

An aquatic weed of ponds and lakes; rare. Fl. & Fr.: January-April.

Utricularia caerulea L. Sp. Pl. 18. 1753; FPM 691; Barnes 27; Taylor 287. *U. racemosa* Wall. ex Walp. in Meyen, Obs. Bot. 19:401. 1843; FBI 4:333.

Slender herbs. Leaves 3-6 x 1-2 mm, rosulate, spatulate. Scapes up to 8 cm tall. Flowers c. 6 mm across, whitish or purplish; corolla with an upcurved spur. Capsules globose.

A weed along edges of lakes and other marshy places, often associated with species of *Drosera*, *Eriocaulon*, *Lindernia* etc.; rare. Fl. & Fr.: January-March.

Utricularia polygaloides Edgew. in Proc. Linn. Soc. London 1:351. 1847; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1118. 1983. *U. stricticaulis* (Koen. ex Oliver) Stapf ex Gamble in Gamble & Fischer, Fl. Pres. Madras 981. 1924 & 689. 1957 (repr.ed.); Barnes 29. *U. reticulata* Sm. var. *stricticaulis* Koen. ex Oliver in J. Linn. Soc. Bot. 3:181. 1869 p.p. excl. syn. *U. uliginosa*. *U. reticulata* Sm. var. *uliginosa* Clarke in Hook. f. Fl. Brit. India 4:331. 1884 p.p.

Slender herbs. Leaves 5-12 x 1-2 mm, rosulate, subulate. Scapes up to 12 cm long. Flowers c. 7 mm across, blue or purplish; corolla with a spur slightly curved downwards or outwards. Capsules lenticular; seeds longitudinally furrowed.

A weed of wetlands, along edges of lakes and marshy places, often associated with species of *Drosera*, *Eriocaulon*, *Lindernia* etc.; common. Fl. & Fr.: January-March.

Utricularia stellaris L.f. Suppl. Pl. 86. 1781; FBI 4:328; FPM 689; Rani & Matthew 1122.

Stolons up to 50 cm long. Leaves 4-5 at each node, auricled at base, much dissected, with numerous minute traps. Scapes up to 10 cm long, emerging above water, with a whorl of floats. Flowers c. 8 mm across, pale yellow. Capsules globose; seeds winged.

An aquatic weed of ponds and lakes; rare. Fl. & Fr.: January-April.

Utricularia scandens Benj. in Linnaea 20:309. 1847; FBI 4:332; FPM 690; Taylor 283. *U. wallichiana* Wight, Ic. 1:1572 A. 1850; Barnes 28.

Barnes records this.

BIGNONIACEAE

- | | | |
|---------------------------------|-------|----------------------|
| 1. Leaves palmately compound | .. .. | <i>Tabebuia</i> |
| 1. Leaves pinnately compound: | | |
| 2. Leaves 2-3-pinnate | .. .. | <i>Millingtonia</i> |
| 2. Leaves unipinnate: | | |
| 3. Flowers in pendulous racemes | .. .. | <i>Kigelia</i> |
| 3. Flowers not as above: | | |
| 4. Calyx spathaceous: | | |
| 5. Corolla campanulate, red | .. .. | <i>Spathodea</i> |
| 5. Corolla salverform, white | .. .. | <i>Dolichandrone</i> |
| 4. Calyx not spathaceous | .. .. | <i>Tecoma</i> |

Dolichandrone (Fenzl) Seem. (*nom. cons.*)

Dolichandrone falcata (Wall. ex DC). Seem. Fl. Vill. Nov. 151. 1880; FBI 4:380; FPM 700; Barnes 30; Steenis in Steenis, Fl. Males. ser. 1:8:179. 1977. *Spathodea falcata* Wall. ex DC. Prodr. 9:206. 1845.

Trees, up to 8 m tall. Leaves usually 5-foliolate; leaflets 1.2-3 x 1.5-3.6 cm, obovate to orbicular, softly tomentose. Flowers c. 2.7 cm across, in terminal or axillary corymbs; corolla c. 4 cm long. Capsules up to 32 x 2 cm, falcate.

In scrub jungles; rare. Fl.: April-June. Fr.: throughout the year.

Kigelia DC.

Kigelia africana (Lam.) Benth. in Hook. Niger Fl. 463. 1849; Steenis 183. *Bignonia africana* Lam. Encycl. 1:424. 1785. *Kigelia pinnata* DC. Prodr. 9:247. 1845; FPM 703; Mayur. 212.

Trees, up to 18 m tall. Leaflets 2-4 pairs, each 5-16 x 3-10 cm, ovate-oblong to obovate-oblong. Flowers c. 5 cm across, purplish-brown or yellowish-brown; calyx splitting into 2-3 lobes; corolla c. 8 cm long. Fruits up to 35 x 15 cm, woody, subcylindric.

Commonly cultivated along roadsides and parks. Fl.: December-May. Fr.: throughout the year. Native of Africa.

Millingtonia L.f.

Millingtonia hortensis L.f. Suppl. Pl. 291. 1781; FBI 4:377; FPM 699; Mayur. 211; Steenis 183.

Trees, up to 18 m tall. Leaflets many, 2-5 x 1.4-3.5 cm, ovate to deltoid or rhomboid, margin serrate-dentate, apex acuminate. Flowers c. 3.5 cm across, white, sweet-scented, in panicles. Capsules up to 25 x 1.7 cm.

Commonly cultivated in gardens and parks as an ornamental and for shade, also runs wild. Fl.: December-March. Fr.: February-May. Native of Malesia.

Spathodea Beauv.

Spathodea campanulata Beauv. Fl. Oware 1:47.t.27. 1805; Brown 111; FPM 703; Mayur. 212; BIT 136; Theob. in Dassan. & Fosb. Rev.Handb. Fl. Ceylon 2:393. 1981.

Trees, up to 12 m tall. Leaflets 7-9 pairs, each 7-17 x 5-8 cm, elliptic, apex acute to shortly acuminate. Flowers c. 7 cm across, in corymbs; corolla campanulate.

Occasionally cultivated in gardens and parks. Fl.: February-April. Native of tropical America.

Tabebuia Gomes ex DC.

Tabebuia rosea (Bertol.) DC. Prodr. 9:215. 1845; Gentry in Brittonia 22:253. 1970; Steenis 185. *Tecoma rosea* Bertol. Fl. Guatimal. 25. 1840.

Trees, up to 20 m tall. Leaves usually 5-foliolate; leaflets 7-26 x 3-11 cm, elliptic, apex acute to acuminate. Flowers c. 7 cm across, pale pink to almost white, in terminal racemes; calyx splitting into 2 or more lobes; corolla up to 9 cm long. Capsules up to 27 x 1.3 cm; seeds winged.

Commonly cultivated along roadsides and in parks. Fl. & Fr.: February-July. Native of Mexico.

Tecoma Juss

Tecoma stans (L.) Kunth, Nov. Gen. Pl. 3:144. 1819; Brown 111; BICS 37. *Bignonia stans* L. Sp. Pl. ed.2. 871. 1763. *Stenolobium stans* (L.) Seem in Ann. Mag. Nat. Hist. ser. 3.10:30. 1862; FPM 703; Mayur. 212.

Shrubs, up to 6 m tall. Leaves imparipinnate; leaflets 3-7, each 4-10 x 1-3 cm, lanceate, serrate, base often oblique, apex acuminate. Flowers c. 4.5 cm across, yellow, in terminal racemes. Capsules up to 20 x 1.5 cm, linear; seeds winged.

Commonly cultivated in gardens and parks. Fl.: November-April. Fr.: March-June. Native of tropical America.

PEDALIACEAE

Fruits spiny, indehiscent	.. .. .	<i>Pedaliium</i>
Fruits not spiny, dehiscent	.. .. .	<i>Sesamum</i>

***Pedaliium* Royen ex L.**

***Pedaliium murex* L.** Syst. Nat. ed. 10. 1123. 1759; Brown 114; FBI 4:386; FPM 704; Mayur. 213; Theob. & Grupe in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:322. 1981.

Spreading undershrubs. Leaves 2-5 x 1.5-3.5 cm, opposite or alternate, ovate, broadly toothed or almost lobed, mucilaginous. Flowers c. 2.2 cm across, yellow, axillary, solitary. Fruit a dry drupe.

A weed of waysides and waste places; common. Fl.: July-September. Fr.: August-December.

***Sesamum* L.**

- | | | |
|---------------------------------------|---------|----------------------|
| 1. Stems erect: | | |
| 2. Seeds winged; corolla purplish-red | .. .. . | <i>S. alatum</i> |
| 2. Seeds not winged; corolla white | .. .. . | <i>S. indicum</i> |
| 1. Stems prostrate | .. .. . | <i>S. prostratum</i> |

***Sesamum alatum* Thonn.** in Schum. & Thonn. Beskr. Guin. Pl. 284. 1827; Ramanujam & Joshi in JBNIS 52:657. 1954; Hepper, Fl. West Trop. Africa 2:389. 1963; Livingstone et al. in J. Econ. Tax. Bot. 7(2):448. 1985. *S. ekambaramii* Naidu in J. Bombay Nat. Hist. Soc. 51:697. 12. 1953. Plate 21 A-G.

Undershrubs, up to 1.5 m tall. Leaves variable, lower leaves opposite, 3-5-foliolate, upper leaves alternate, palmately parted or simple; leaflets 3-8 x 0.3-1.5 cm, linear to elliptic or ovate-oblong. Flowers c. 2.3 cm across, axillary. Capsules up to 4.5 x 0.8 cm, 2-valved.

A weed of sandy places near seashores and in river beds; rare. Fl. & Fr.: August-April.

***Sesamum indicum* L.** Sp. Pl. 634. 1753; Bruce in Turrill & Milne-Redh. Fl. Trop. East Africa 17. 1953; Brown 114; FBI 4:387; FPM 704; Mayur. 214; Theob. & Grupe in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:325. 1981. *S. orientale* L. Sp. Pl. 634. 1753; Steenis in Steenis, Fl. Males. ser. I. 7:829. 1976.

Undershrubs, up to 1.2 m tall. Leaves 5-12 x 2-8 cm; upper leaves ovate-oblong to oblong-lanceate or linear; lower leaves palmately compound or lobed. Flowers c. 2.3 cm across, axillary. Capsules up to 2.7 x 0.7 cm, oblong.

Commonly cultivated in field, also runs wild. Fl. & Fr.: December-April.

***Sesamum prostratum* Retz.** Obs. Bot. 4:28. 1779; Brown 114; FBI 4:387; FPM 704; Mayur. 213; Theob. & Grupe 327.

Prostrate herbs. Leaves 6-20 x 5-15 mm, ovate or obovate, margin crenate-dentate. Flowers c. 2.2 cm across, purplish-red, axillary. Capsules up to 1.2 x 0.8 cm, ovoid-oblong.

A weed of sandy seashores; fairly common. Fl. & Fr.: November-March.



PLATE 21: *Sesamum alatum* Thonn. A - Twig. B, C & D - Lower leaves. E - L.S. of flower. F - Fruit. G - Seed.

MARTYNIACEAE

Martynia L.

Martynia annua L. Sp.Pl. 618. 1753; FPM 705; Mayur. 213; Backer in Steenis, Fl. Males.ser. 1.4:221. 1951; Hevly in Taxon 18:527. 1969. *Martynia diandra* Gloxin, Obs. Bot.14.t. 1. 1785; Brown 113; FBI 4:386.

Undershrubs, with unpleasant odour, up to 1 m tall. Leaves 8-18 x 7-17 cm, broadly ovate, viscid-pubescent. Flowers c. 2.5 cm across, pinkish-purple or white, in terminal racemes. Fruits c. 3 x 2.2 cm, ovoid, beaked at apex; epicarp splitting at maturity; endocarp black, stony, 2-hooked at apex.

A weed of rubbish heaps and other waste places near railway tracks, roadsides etc.; common. Fl. & Fr.: July-November.

ACANTHACEAE

- | | | |
|--|---------|-------------------------|
| 1. Plants with 6 thorns at each node | .. .. . | <i>Hygrophila</i> p.p |
| 1. Plants without 6 thorns at each node | .. .. . | <i>Lepidagathis</i> |
| 2. Bracts and sepals spine-tipped | .. .. . | <i>Lepidagathis</i> |
| 2. Bracts and sepals not spine-tipped: | | |
| 3. Corolla with both posterior and anterior lobes: | | |
| 4. Leaves radical | .. .. . | <i>Elytraria</i> |
| 4. Leaves cauline: | | |
| 5. Calyx entire or many-toothed | .. .. . | <i>Thunbergia</i> |
| 5. Calyx deeply 4-5-lobed: | | |
| 6. Retinacula straight | .. .. . | <i>Hygrophila</i> p.p. |
| 6. Retinacula hooked: | | |
| 7. Corolla 2-lipped: | | |
| 8. Fertile stamens 4 | .. .. . | <i>Dyschoriste</i> p.p. |
| 8. Fertile stamens 2: | | |
| 9. Flowers in spikes: | | |
| 10. Corolla bluish green | .. .. . | <i>Ecbolium</i> |
| 10. Corolla not bluish green: | | |
| 11. Seeds 1 or 2 | .. .. . | <i>Adhatoda</i> |
| 11. Seeds 4: | | |
| 12. Bracts 4-farious | .. .. . | <i>Rungia</i> |
| 12. Bracts not 4-farious | .. .. . | <i>Justicia</i> |
| 9. Flowers not in spikes: | | |
| 13. Capsules with a solid stalk at base: | | |
| 14. Corolla white | .. .. . | <i>Rhinacanthus</i> |
| 14. Corolla rosy-pink | .. .. . | <i>Peristrophe</i> |
| 13. Capsules without a solid stalk at base: | | |
| 15. Seeds 4 per capsule | .. .. . | <i>Indoneesiella</i> |
| 15. Seeds 8-12 per capsule | .. .. . | <i>Andrographis</i> |

7. Corolla subequally 5-lobed:
16. Flowers solitary:
17. Seeds 4 per capsule *Dyschoriste* p.p.
17. Seeds more than 10 per capsules *Dipteracanthus* p.p.
16. Flowers not solitary:
18. Fertile stamens 4:
19. Roots tuberous *Ruellia*
19. Roots not tuberous:
20. Inflorescences terminal:
21. Stems straggling *Asystasia*
21. Stems not straggling *Stenosiphonium*
20. Inflorescences axillary:
22. Flowers in fascicles:
23. Seeds 4 *Dyschoriste* p.p.
23. Seeds more than 10 *Dipteracanthus* p.p.
22. Flowers in spikes *Crossandra*
18. Fertile stamens 2:
24. Calyx 4-lobed *Barleria*
24. Calyx 5-lobed *Eranthemum*
3. Corolla without posterior lobes *Blepharis*

Adhatoda Mill.

Adhatoda zeylanica Medik. Hist. & Commentat. Acad. Elect. Sci. Theord.-Palat. 6:393. 1790; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1147. 1983. *A. vasica* Nees in Wall. Pl. As. Rar. 3:103. 1832; Brown 145; FBI 4:540; FPM 758; Mayur. 224 *Justicia adhatoda* L. Sp. Pl. 15:1753; FTN 2:15.

Shrubs, up to 3 m tall. Leaves 12-22 x 3-6 cm, lanceate to lanceate-elliptic. Flowers c. 2 cm across, white, in axillary spikes; bracts foliaceous. Capsules c. 2 cm long.

Commonly cultivated in medicinal gardens, also as hedge plant. Fl. & Fr.: July-December.

Andrographis Wall. ex Nees

- Leaves lanceate-elliptic; anthers bearded *A. paniculata*
- Leaves ovate; anthers not bearded *A. elongata*

Andrographis elongata T. Anders. in J. Linn. Soc. London 9:502. 1867; FBI 4:502; FPM 735; Barnes 32.

Herbs or undershrubs; stems strongly 4-angled. Leaves 2-7 x 1-4 cm, sessile. Flowers c. 8 mm across, pale pink or pale white, in lax, axillary racemes. Capsules c. 2 cm long.

In thickets and scrub jungles; rare. Fl. & Fr.: February-April.

Andrographis paniculata (Burm.f.) Wall. ex Nees in Wall. Pl. As. Rar. 3:116. 1832; Brown 147; FBI 4:501; FPM 734; Mayur.220. *Justicia paniculata* Burm.f. Fl. Ind. 9. 1768.

Herbs, up to 50 cm tall; stems 4-angled. Leaves 3-8 x 1-2 cm, glabrous, apex acute to shortly acuminate. Flowers c. 1 cm across, pale white with purplish spots, in simple or branched, axillary racemes. Capsules c. 2 cm long.

A weed of waste places along roadsides, also cultivated around houses; common. Fl. & Fr.: December-April.

Decoction of stems and leaves is a remedy for fever, very bitter. Tamil: Nila vaemubu.

Asystasia Blume

Asystasia gangetica (L.) T. Anders. in Thw. Enum. Pl. Zeyl. 235. 1860; FPM 744; Mayur. 221; Santapau in Bot. Mem. Univ. Bombay 2:68. 1951. *Justicia gangetica* L. in Torner, Cent. Pl. 2:3. 1756. *Asystasia coromandeliana* Wight ex Nees in Wall. Pl. As. Rar. 3:89. 1832; Brown 143; FBI 4:493.

Straggling herbs; branches up to 4 m long. Leaves 2-5 x 1-3 cm, ovate, softly pubescent. Flowers c. 2.5 cm across, cream-coloured or pinkish to pale purple, in terminal, unilateral racemes. Capsules c. 2 cm long, ellipsoid with a solid base.

In scrub jungles and thickets, also along fences and hedges; common. Fl. & Fr.: throughout the year.

Barleria L.

Plants armed; corolla yellow

.. .. . *B. prionitis*

Plants unarmed; corolla pale white

.. .. . *B. longiflora*

Barleria longiflora L.f. Suppl. Pl. 290. 1781; FBI 4: 485; FPM 742; Barnes 33; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1164. 1983.

Undershrubs, up to 2 m tall. Leaves 1.5-3.5 x 1-3 cm, ovate, softly white-tomentose. Flowers c. 3 cm across, axillary, solitary, appearing racemose above; corolla tube c. 10 cm long. Capsules c. 1.4 cm long; seeds sericeous.

In scrub jungles, particularly along rocky slopes, Vandalur hill; rare. Fl. & Fr.: November-March.

Barleria prionitis L. Sp. Pl. 636. 1753; Brown 144; FBI 4:482; FPM 741; Mayur. 220; Rani & Matthew 1166.

Undershrubs, up to 1.2 m tall, with pairs of axillary spines. Leaves 4-10 x 1-3 cm, narrowly elliptic, glabrous, base attenuate. Flowers c. 2.5 cm across, in axillary fascicles or terminal spikes; corolla 3-4 cm long. Capsules up to 2.5 cm long, ovoid with a solid tapering beak, 2-seeded; seeds hairy.

In thickets and jungles, sometimes cultivated; fairly common. Fl. & Fr.: November-April. Tamil: Kaattukkanahaambaram, Mullukkanahaambaram, Manjakkanahaambaram.

Blepharis Juss.

Leaves petiolate, coarsely toothed	.. .. .	<i>B. maderaspatensis</i>
Leaves subsessile, entire	.. .. .	<i>B. repens</i>

Blepharis maderaspatensis (L.) Heyne ex Roth, Nov. Pl. Sp. 320. 1821; Napper in Kew Bull. 24:323. 1970. *Acanthus maderaspatensis* L. Sp. Pl. 639. 1753. *Blepharis boerhaviifolia* Pers. Syn. Pl. 2:180. 1806; FBI 4:478; FPM 712; Mayur. 216.

Prostrate or scrambling herbs. Leaves 2-5 x 1-3 cm, in whorls of 4, elliptic to elliptic-obovate. Flowers c. 1.3 cm long, pale blue or violet, solitary or 2-4 together, in axillary cymes; bracteoles bristly. Capsules c. 8 mm long, 2-seeded.

A weed of waste places, in thickets and scrub jungles, often on barren soil; fairly common. Fl. & Fr.: February-April.

Blepharis repens (Vahl) Roth, Nov.Pl.Sp. 321.1821; FTN 2:143. *Acanthus repens* Vahl, Symb. Bot. 2:76. 1791. *Blepharis molluginifolia* Pers. Syn. 2: 180. 1806; FPM 712; Mayur. 217.

Prostrate herbs, rooting at nodes. Leaves 5-20 x 3-8 mm, in whorls of 4, oblong. Flowers c. 7 mm long, pale blue, axillary; bracts bristly. Capsules c. 5 mm long, 2-seeded.

A weed of lawns, moist or drying open grounds; fairly common. Fl. & Fr.: December-March.

Crossandra Salisb.

Crossandra infundibuliformis (L.) Nees in Wall. Pl. As. Rar. 3:98. 1832; Brown 145; Santapau in Bot. Mem. Univ. Bombay 2:55. 1951. *Justicia infundibuliformis* L. Syst. Nat. ed. 10. 850. 1759. *Crossandra undulaefolia* Salisb. in Hook. Parad. Lard.1.12. 1805; FBI 4:492; FPM 739; Mayur. 225.

Undershrubs, up to 1.2 m tall; twigs glabrous or pubescent. Leaves 3-16 x 1-5 cm, whorled, ovate to ovate-elliptic or lanceate-elliptic, base often attenuate. Flowers 2.5-3.8 cm across, yellow to red, in long, dense spikes; corolla tube up to 2.5 cm long.

Commonly cultivated in gardens as an ornamental. Fl.: throughout the year.

Dipteracanthus Nees

Plants aromatic, erect	.. .. .	<i>D. patulus</i>
Plants not aromatic, prostrate or scandent	.. .. .	<i>D. prostratus</i>

Dipteracanthus patulus (Jacq.) Nees in Wall. Pl. As. Rar. 3:82. 1832; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1171. 1983. *Ruellia patula* Jacq. Misc. Austriac. 2:358. 1781; FBI 4:412; FPM 714; Mayur. 218.

Undershrubs, up to 40 cm tall. Leaves 1-2.5 x 0.5-1.7 cm, elliptic to ovate, softly pubescent. Flowers c. 1.8 cm across, pale blue, axillary, solitary or 2-3 together. Capsules c. 1.5 cm long.

A weed of waste places along roadsides and railway tracks; rare. Fl. & Fr.: August-February.

Dipteracanthus prostratus (Poir.) Nees in Wall. Pl. As. Rar. 3:81. 1832; Rani & Matthew 1171. *Ruellia prostrata* Poir. in Lam. Encycl. 6:349. 1804; FBI 4:411; FPM 714; Mayur. 218.

Prostrate herbs, often rooting at nodes; branches up to 60 cm long, sometimes straggling. Leaves 1.5-3.5 x 1-3 cm, ovate to ovate-elliptic. Flowers c. 2.5 cm across, pale blue or violet, solitary, axillary; bracteoles 2, foliaceous. Capsules c. 2 cm long, 16-20-seeded.

A weed of open places, roadsides and thickets; common. Fl. & Fr.: June-December.

Dyschoriste Nees

Leaves attenuate at base; corolla as long as or shorter than calyx	.. ..	<i>D. nagchana</i>
Leaves cuneate to obtuse at base; corolla longer than calyx	.. ..	<i>D. madurensis</i>

Dyschoriste madurensis (Burm.f.) Kuntze, Rev.Gen. Pl. 2:486. 1981. *Justicia madurensis* Burm. f. Fl. Ind. 9.1.4.f. 3. 1768. *Dyschoriste littoralis* (L.f.) Nees in Wall. Pl. As. Rar. 3:81. 1832; FPM 718; Mayur. 217. *Ruellia littoralis* L.f. Suppl. Pl. 289. 1781.

Suberect undershrubs; stems woody. Leaves 0.7-1.5 x 0.6-1.2 cm, obovate. Flowers c. 2 cm long, pale blue, solitary, axillary. Capsules c. 8 mm long, 4-seeded; seeds sericeous.

A weed of waste places; rare. Fl. & Fr.: August-December.

The hairs on seeds are appressed to the seed surface; they suddenly swell and become erect on becoming wet.

Dyschoriste nagchana (Nees) Bennet in Indian Forester 109: 220. 1983; FTN 2:145. *Dipteracanthus nagchana* Nees in Wall. Pl. As. Rar. 3:82. 1832. *Dyschoriste depressa* Nees in Wall. Pl. As. Rar. 3:81. 1832.

Prostrate or decumbent herbs, rooting at lower nodes. Leaves 1-3 x 0.6-2 cm, obovate to spatulate-elliptic, base attenuate. Flowers c. 1.3 cm long, pale blue, in axillary fascicles. Capsules c. 8 mm long.

A weed of drying ditches and other moist places; rare. Fl. & Fr.: January-March.

Ecbolium Kurz.

Ecbolium viride (Forssk.) Alston in Trimen, Handb. Fl. Ceylon 6 (Suppl.): 229. 1931. *Justicia viridis* Forssk. Fl. Aegypt. - Arb. 5.1775. *Ecbolium linneanum* Kurz in J. Asiat. Soc. Bengal 40:75. 1871; FBI 4:544; FPM 752; Mayur. 222.

Undershrubs, up to 1.2 m tall. Leaves 4-12 x 1.2-5 cm, ovate to ovate-elliptic or ovate-lanceate, puberulous, base attenuate, apex acute to shortly acuminate. Flowers c. 2.5 cm across, in dense, terminal spikes; bracts 4-farious; corolla tube c. 2.8 cm long; upper lip filiform, reflexed. Capsules clavate.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Elytraria Michx. (*nom.cons.*)

Elytraria acaulis (L.f.) Lindau in Engler & Prantl, 1:304. 1897; FPM 709; Mayur. 216; Bremek. in Reinwardtia 3:250. 1955. *Justicia acaulis* L.f. Suppl. Pl. 84. 1781. *Elytraria crenata* Vahl, Enum.Pl. 1:106. 1804; FBI 4:394.

Scapigerous herbs, up to 22 cm tall. Leaves 7-15 x 1.5-5 cm, obovate-oblong, or spatulate-elliptic, crenate. Flowers c. 8 mm long, white, in dense spikes. Capsules c. 5 mm long, ovoid.

A weed of waste places, especially along the bunds of lakes or near canals; rare. Fl. & Fr.: November-April.

Eranthemum L.

Eranthemum roseum (Vahl) R.Br. Prodr. 477. 1810; Santapau in Univ. Bombay Bot. Mem. 2:34. 1951; FPM 719; Mayur. 225. *Justicia rosea* Vahl, Enum. Pl. 1:165. 1804. *Daedalacanthus roseus* (Vahl) T. Anders. in J. Linn.Soc. Bot. 9:487. 1867; FBI 4:419.

Shrubs, up to 2 m tall. Leaves 6-12 x 2-5 cm, ovate-elliptic to ovate-lanceate, scaberulent. Flowers c. 2.5 cm across, blue to pale white or pink, in axillary spikes; corolla tube c. 2.5 cm long.

Commonly cultivated in gardens as an ornamental. Fl.: December-March.

Flowers used by women to adorn their hair. Tamil: December poo.

Hygrophila R.Br.

Plants armed	.. .. .	<i>H. auriculata</i>
Plants unarmed	.. .. .	<i>H. balsamica</i>

Hygrophila auriculata (Schum.) Heine in Kew Bull. 16:172. 1962; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1178. 1983. *Barleria auriculata* Schum. in Schum. & Thonn. Beskr. Guin. Pl. 285. 1827. *Asteracantha longifolia* (L.) Nees in Wall. Pl. As. Rar. 3:90. 1832; Brown 144; Wood 274; FPM 712; Mayur. 217. *Barleria longifolia* L. In Torner, Cent. Pl. 2:22. 1756 non *Hygrophila longifolia* Nees 1847.

Undershrubs, up to 70 cm tall. Leaves 3-12 x 1-3 cm, opposite, often appearing falsely whorled, lanceate-oblong. Flowers c. 1.7 cm across, pale blue or violet, in verticillate cymes; calyx deeply 4-partite; corolla c. 3 cm long. Capsules c. 8 mm long, linear-oblong.

A semiaquatic weed near lakes, rice fields and ditches; common. Fl. & Fr.: October-April.
Tamil: Neermulli.

Hygrophila balsamica (L.f.) Rafin. Fl. Tell. 4:66.1838; Sreemadh.in BBSI 10:222. 1968. *Ruellia balsamica* L.f. Suppl. Pl. 289. 1781. *Cardanthera balsamica* (L.f.) Benth. ex Clarke in Hook.f.Fl.Brit. India 4:401. 1884; FPM 711; Barnes 31. *Ilygrophila angustifolia* auct. non. R.Br. 1810; Mayur. 218.

Aromatic herbs, up to 30 cm tall. Leaves 2-5 x 1-2.5 cm; lower leaves often dissected, upper leaves lanceate to oblong-lanceate, sessile, serrate-crenate. Flowers c. 1.2 cm long, pale blue or violet, in verticillate cymes. Capsules c. 6 mm long, pubescent.

A weed of rice fields and ditches; fairly common. Fl. & Fr.: January-April.

Indoneesiella Sreemadh.

Indoneesiella echioides (L.) Sreemadh. in Phytologia 15:271. 1967. *Justicia echioides* L. Sp.Pl.16. 1753. *Andrographis echioides* (L.) Nees in Wall. Pl. As.Rar. 3:117. 1832 p.p.; Wood 276; FBI 4:505; FPM 736; Mayur. 220.

Herbs, up to 40 cm tall; stems 4-angled. Leaves 3-6 x 1-1.6 cm, oblong, sessile, hirsute. Flowers c. 1.2 cm long, white with purplish spots, in axillary, unilateral racemes. Capsules c. 1.2 cm long, pubescent.

A weed of waste places; common. Fl. & Fr.: August-December.

Justicia L.

- | | | |
|-------------------------------|---------|----------------------|
| 1. Calyx lobes 5: | | |
| 2. Bracts greenish-white | .. .. . | <i>J. betonica</i> |
| 2. Bracts not greenish-white: | | |
| 3. Bracts linear to elliptic | .. .. . | <i>J. gendarussa</i> |
| 3. Bracts orbicular-spatulate | .. .. . | <i>J. glauca</i> |
| 1. Calyx lobes 4: | | |
| 4. Capsules glabrous | .. .. . | <i>J. diffusa</i> |
| 4. Capsules pubescent | .. .. . | <i>J. prostrata</i> |

Justicia betonica L. Sp.Pl. 15. 1753; FBI 4:525; FPM 755; Mayur. 222; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1184. 1983.

Undershrubs, up to 1.5 m tall. Leaves 5-12 x 1.5-3 cm, lanceate. Flowers c. 1.2 cm long, white with pink spots, in dense, terminal spikes. Capsules c. 1.2 cm long.

A weed of gardens and waste places along roadsides, railway tracks etc.; fairly common. Fl. & Fr.: January-April.

Justicia diffusa Willd. Sp.Pl. 1:87. 1797; FBI 4:538; FPM 757; Mayur. 223; Rani & Matthew 1185.

Suberect herbs, up to 30 cm tall. Leaves 2-5 x 1-3 cm, ovate-elliptic to elliptic-lanceate, glabrous. Flowers c. 5 mm across, pale blue, in axillary or terminal spikes; bracts shorter than calyx.

A weed of open rocky places; very rare. Fl. & Fr.: September-March.

Justicia gendarussa Burm.f. Fl. Ind. 10. 1768; FBI 4:532; FPM 755; Mayur. 223; Rani & Matthew 1186.

Shrubs, up to 1.5 m tall. Leaves 5-10 x 1-3 cm, lanceate to lanceate-elliptic. Flowers c. 1.2 cm long, pinkish-white, in spikes at the ends of branches. Capsules c. 1.2 cm long.

Commonly cultivated in gardens as a hedge plant. Fl. & Fr.: February-April. Tamil: Karunocchi.

Justicia glauca Rottl. Ges. Naturf. Freunde Berlin Neue Schriften 4:219. 1803; FBI 4:529; FPM 755; Mayur. 223; Rani & Matthew 1187.

Herbs, up to 40 cm tall; stems 4-angled. Leaves 1.5-3.5 x 1-3 cm, ovate to ovate-elliptic, softly pubescent. Flowers c. 8 mm long, white with purplish spots, in axillary and terminal spikes; bracts glandular-pubescent. Capsules c. 6 mm long.

A weed of waste places, also in scrub jungles and thickets; common. Fl. & Fr.: October-January.

Justicia prostrata (Clarke) Gamble, in Gamble & Fischer, Fl. Pres. Madras 1081. 1924 & 757. 1957 (repr.ed.); Mayur. 223; Rani & Matthew 1188. *J. diffusa* Willd. var. *prostrata* Clarke in Hook.f. Fl. Brit. India 4:538. 1885.

Prostrate or suberect herbs, up to 20 cm tall; stems rooting at lower nodes. Leaves 5-20 x 4-15 mm, ovate, pubescent. Flowers c. 5 mm across, pale blue to almost white, in terminal spikes. Capsules c. 4 mm long.

A weed of playgrounds, lawns and waste places, along roadsides, railway tracks etc.; very common. Fl. & Fr.: throughout the year.

Justicia salsoloides T. Anders. in J. Linn. Soc. Bot. 9:514. 1867; FBI 4:530; FPM 755; Mayur. 223.

Mayuranathan records this.

Justicia vahlii Roth, Nov. Pl. Sp. 14. 1821; FPM 757; Mayur. 223. *J. diffusa* Willd. var. *vahlii* Clarke in Hook.f. Fl. Brit. India 4:538. 1885.

Mayuranathan records this.

***Lepidagathis* Willd.**

Lepidagathis cristata Willd. Sp. Pl. 3:400. 1800; Brown 145; FBI 4:516; FPM 747; Mayur. 221.

Prostrate herbs with thick rootstock; stems woody at base. Leaves 2-3.5 x 0.3-0.6 cm, linear-oblong. Flowers c. 1.2 cm long, pinkish to pale white, in dense, capitate clusters at base of stems.

A weed of open, barren lands; common. Fl. & Fr.: December-May. Tamil: Karappaan poondu.

Peristrophe Nees

Peristrophe paniculata (Forssk.) Brummit in Kew Bull. 38: 451. 1983; FTN 2:155. *Dianthera paniculata* Forssk. Fl. Aeg.-Arab. 7. 1775. *Peristrophe bicalyculata* (Retz.) Nees in Wall. Pl.As.Rar. 3:113. 1832; FPM 759; Mayur. 225. *Dianthera bicalyculata* Retz. Kongl. Vetensk. Acad. Handl. 297. t.9.1776.

Herbs, up to 1.5 m tall; stems strongly 4-angled. Leaves 2-6 x 1-4 cm, ovate, softly pubescent. Flowers c. 1.2 cm long, pinkish, in axillary and terminal cymes. Capsules c. 8 mm long.

A weed of waste places along railway tracks, roadsides etc; locally abundant. Fl. & Fr.: November-April.

Rhinacanthus Nees

Rhinacanthus nasutus (L.) Kurz. in J. Asiat.Soc.Bengal 39:79. 1870. *Justicia nasuta* L. Sp.Pl.16. 1753. *Rhinacanthus communis* Nees in Wall. Pl.As. Rar. 3:109. 1832; Brown 146; Wood 276; FBI 4:541; FPM 758; Mayur. 224.

Undershrubs, up to 1.5 m tall. Leaves 4-10 x 1.5-4 cm, elliptic-lanceate, glabrous, base attenuate. Flowers c. 2.5 cm long, white, in panicles at ends of branches. Capsules c. 2 cm long.

A weed of waste places, also cultivated in gardens; rare. Fl. & Fr.: November-March. Tamil: Naaga malli.

Ruellia L.

Ruellia tuberosa L. Sp.Pl. 635. 1753; FPM 714; Mayur. 219; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1197. 1983.

Herbs, up to 30 cm tall. Leaves 4-8 x 2-3.5 cm, oblong to oblong-elliptic. Flowers c. 3.5 cm across, blue, in axillary pairs or in cymes; calyx c. 2 cm long; corolla c. 5 cm long. Capsules c. 3 cm long.

A weed of waste places along railway tracks and waysides; fairly common. Fl. & Fr.: June-September.

Rungia Nees

Rungia repens (L.) Nees in Wall. Pl. As. Rar. 3:110. 1832; Brown 146; FBI 4:549; FPM 750; Mayur. 221.

Decumbent herbs, rooting at lower nodes; stems up to 20 cm long. Leaves 2-5 x 1-2.2 cm, oblong-lanceate. Flowers c. 1.2 cm long, pale white to pale blue, in dense, terminal spikes; lower anther lobe white-appendaged at base.

A weed along bunds of rice fields; common. Fl.: July-March.

Stenosiphonium Nees

Inflorescences longer than leaves	.. .. .	<i>S. confertum</i>
Inflorescences shorter than leaves	.. .. .	<i>S. russellianum</i>

Stenosiphonium confertum Nees in DC. Prodr. 11:105. 1847; FBI 4:427; FPM 716; Mayur. 219; Bremek. Verh. Kon. Ned.Akad. Wetensch. Afd. Natuurk. Tweede Sect. 41(1):153. 1944.

Shrubs, up to 2 m tall. Leaves 4-7 x 2-4 cm, ovate or rhomboid-elliptic, crenate, base attenuate. Flowers c. 2 cm long, pale blue, in terminal spikes with close clusters; calyx viscid-pubescent. Capsules c. 1 cm long.

In scrub jungles; rare. Fl. & Fr.: January-March.

Stenosiphonium russellianum Nees in Wall. Pl. As.Rar. 3:84. 1832; FBI 4:427; FPM 717; Mayur. 219; FTN 2:161.

Shrubs, up to 1.5 m tall. Leaves 6-10 x 2-4 cm, rhomboid-elliptic to ovate-elliptic, crenate-serrate. Flowers c. 2.3 cm long, blue, in terminal spikes with distant clusters. Capsules c. 1 cm long.

In scrub jungles; rare. Fl. & Fr.: January-March.

Thunbergia Retz. (*nom.cons.*)

Shrubs erect	.. .. .	<i>T. erecta</i>
Shrubs climbing	.. .. .	<i>T. grandiflora</i>

Thunbergia erecta (Benth.) T. Anders.in. J. Linn. Soc.Bot. 7:18. 1864; Santapau, Acanthac. 10; BICS 107. *Meyenia erecta* Benth. in Hook. Niger Fl. 476. 1849.

Shrubs, up to 3 m tall. Leaves 3-8 x 1.5-4.5 cm, elliptic to ovate-elliptic. Flowers c. 4.5 cm across, purplish-blue to pale white, axillary; calyx 10-or more-toothed; corolla c. 6 cm long.

Commonly cultivated in gardens as an ornamental. Fl.: throughout the year. Native of tropical America.

Thunbergia grandiflora (Roxb. ex Rottl.) Roxb. Fl. Ind. 3:34. 1832; Brown 142; FBI 4:392; FPM 708; Mayur. 215; Santapau in Bot. Mem. Univ. Bombay 2:9. 1951; BICS 108. *Flemingia grandiflora* Roxb. ex Rottl. Ges. Naturf. Freunde Berlin Neue Schriften 4:202. 1803.

Leaves 5-12 x 3-7 cm, ovate, broadly dentate, scabrous, base cordate. Flowers c. 5 cm across, blue, axillary or in racemes; calyx entire.

Commonly cultivated in gardens (over fences or compound walls) as an ornamental. Fl.: October-March.

Thunbergia fragrans Roxb. Pl. Cor.1.67. 1796 & Fl. Ind. 3:33. 1832; Brown 143; FBI 4:390; FPM 707; Mayur. 215; BICS 105; Bremek. Verh. Kon. Ned. Akad. Wetensch. Afd. Natuurk. Tweede Sect. 50(4):50. 1955.

Mayuranathan records this, cultivated.

Acanthus L.

Acanthus ilicifolius L. Sp.Pl. 639. 1753; FBI 4:487; FPM 712; Mayur. 216; Rani & Matthew in Matthew, Fl. Tamilnadu Carnatic 3:1146. 1983.

Mayuranathan records this.

VERBENACEAE

- | | | |
|---------------------------------------|---------|-----------------------|
| 1. Stems prostrate, rooting at nodes | .. .. . | <i>Phyla</i> |
| 1. Stems erect, not rooting at nodes: | | |
| 2. Leaves digitately compound | .. .. . | <i>Vitex</i> |
| 2. Leaves simple: | | |
| 3. Twigs prickly | .. .. . | <i>Lantana</i> |
| 3. Twigs not prickly: | | |
| 4. Flowers in spikes | .. .. . | <i>Stachytarpheta</i> |
| 4. Flowers not in spikes: | | |
| 5. Flowers in racemes | .. .. . | <i>Duranta</i> |
| 5. Flowers not in racemes: | | |
| 6. Fruits dry | .. .. . | <i>Tectona</i> |
| 6. Fruits fleshy: | | |
| 7. Corolla under 1 cm long | .. .. . | <i>Premna</i> |
| 7. Corolla over 1.5 cm long: | | |
| 8. Fruits under 1 cm across | .. .. . | <i>Clerodendrum</i> |
| 8. Fruits over 1.2 cm across. | .. .. . | <i>Gmelina</i> |

Clerodendrum L.

- | | | |
|--|---------|---------------------|
| 1. Herbs or undershrubs; corolla tube over 6 cm long | .. .. . | <i>C. indicum</i> |
| 1. Shrubs or stragglers; corolla tube under 5 cm long: | | |
| 2. Calyx lobed half-way down; leaves toothed | .. .. . | <i>C. phlomidis</i> |
| 2. Calyx truncate or toothed above; leaves entire | .. .. . | <i>C. inerme</i> |

Clerodendrum indicum (L.) Kuntze, Rev.Gen.Pl. 2:506 (as "*Clerodendron*"). 1891; Sastri in Wealth India 2 (R):231. 1950; BICS 143; H.N. Moldenke & A.L. Moldenke in Dassan. & Fosb.Rev. Handb. Fl.Ceylon 4:426. 1983. *Siphonanthus indica* L. Sp.Pl. 109. 1753. *Clerodendron siphonanthus* R. Br. in Ait.Hort. Kew ed.2.4:65. 1812; Brown 140; FBI 4:595; FPM 770; Mayur. 230.

Undershrubs, up to 2 m tall; stems mostly unbranched, hollow. Leaves 5-15 x 0.6-4 cm, linear-lanceate or oblong-elliptic to oblanceate. Flowers up to 12 cm long, white, in terminal panicles. Fruits c. 1.2 cm across, often 4-lobed.

Occasionally cultivated in gardens, also runs wild. Fl. & Fr.: October-April.

Clerodendrum inerme (L.) Gaertn. Fruct.1:271. 1788; Brown 140; FBI 4:589; FPM 769; Mayur. 231; BICS 146; H.N. Moldenke & A.L. Moldenke 447. *Volkameria inermis* L.Sp.Pl. 637. 1753.

Shrubs, up to 4 m tall, sometimes straggling. Leaves 2-8 x 0.8-4 cm, elliptic to obovate or suborbicular, semi-succulent. Flowers white, in axillary cymes; calyx c. 4 mm long, 5-toothed; corolla tube up to 3 cm long. Drupes up to 10 x 8 mm.

Commonly cultivated as a hedge plant, also runs wild. Fl. & Fr.: throughout the year.

Clerodendrum phlomidis L.f. Suppl. Pl. 292. 1781; Brown 140; FBI 4:590; FPM 769; Mayur. 230; BICS 154; H.N. Moldenke & A.L. Moldenke 466.

Shrubs, up to 4 m tall. Leaves 2-5 x 1-4 cm, ovate to deltoid or rhomboid, puberulous. Flowers pale pink or whitish, in cymes; calyx c. 1 cm long, 5-lobed; corolla tube up to 2.5 cm long. Drupes c. 1 cm across, obovoid.

Occasionally cultivated as a hedge plant. Fl. & Fr.: September-March.

Duranta L.

Duranta erecta L. Sp. Pl. 637. 1753; FTN 2:165. *D. plumieri* Jacq. Select. Am. 186.t.176.f.76. 1763; FBI 4:560; FPM 774; Mayur. 231.

Shrubs, up to 6 m tall. Leaves 2-5 x 1-4 cm, ovate-elliptic. Flowers c. 1 cm across, blue, in terminal and axillary racemes; ovary 8-locular. Drupes c. 1 cm across, orange-yellow.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: November-April. Native of Central America.

Gmelina L.

Gmelina asiatica L. Sp. Pl. 626. 1753; Brown 141; FBI 4:582; FPM 768; Mayur. 230.

Shrubs, up to 5 m tall; branchlets often become thorny. Leaves 1-5 x 0.5-3 cm, ovate to elliptic, obovate, triangular or subrhomboid, entire or 3-5-lobed. Flowers c. 3 cm across, yellow, axillary, solitary. Drupes c. 2 cm across, subglobose.

In scrub jungles; common. Fl. & Fr.: throughout the year. Tamil: Kumizha maram.

Lantana L.

Lantana camara var. *aculeata* (L.) H.N. Moldenke in Torrey 34:9. 1934; FBI 4:562; Matthew in RBSI 20:180. 1969. *L. aculeata* L. Sp. Pl. 627. 1753; Brown 138; FPM 761; Mayur. 227.

Prickly shrubs, often straggling. Leaves 2-6 x 1-4 cm, ovate, serrate, scabrous. Flowers c. 7 mm across, pinkish to orange-red or yellowish, in axillary peduncled heads; corolla salverform; tube c. 1 cm long. Fruits c. 4 mm across, black when ripe.

In jungles and hedges; common. Fl. & Fr.: throughout the year.

Fruits eaten by children. Tamil: Unni chedi.

Phyla Lour.

Phyla nodiflora (L.) Greene in Pittonia 4:46. 1899; Meeuse in Blumea 5:69. 1942. *Verbena nodiflora* L. Sp.Pl.20. 1753. *Lippia nodiflora* (L.) A.Rich. in Michx.Fl. Bor. Amer. 2:15. 1803; FBI 4:563; FPM 762; Mayur. 227.

Prostrate herbs, rooting at nodes. Leaves 1-4 x 0.5-2 cm, obovate to spatulate or elliptic, serrate. Flowers c. 2 mm across, pinkish-white, in dense, subcapitate spikes. Fruits c. 2 mm long.

A weed of moist places; common. Fl. & Fr.: throughout the year.

Premna L. (nom.cons.)

- | | |
|--|---|
| 1. Corolla brownish | <i>P. corymbosa</i> |
| 1. Corolla greenish, creamy or pale yellow: | |
| 2. Leaves tomentose or woolly beneath when mature: | |
| 3. Trees | <i>P. tomentosa</i> |
| 3. Shrubs | <i>P. latifolia</i> var. <i>latifolia</i> |
| 2. Leaves glabrate beneath when mature | <i>P. latifolia</i> var. <i>viburnoides</i> |

Premna corymbosa Rottl. & Willd. Ges. Naturf. Freunde Berlin Neue Schriften ser. 2.4:187. 1803; FBI 4:573; FPM 767; Mayur. 228; FTN 2:167.

Straggling shrubs, up to 4 m tall. Leaves 3-8 x 2-5 cm, ovate-lanceate, base truncate. Flowers c. 3 mm across, in terminal, corymbose cymes; calyx bilipped; corolla c. 7 x 2.7 mm, bearded within. Drupes c. 7 mm across.

In scrub jungles; common. Fl. & Fr.: throughout the year, in successive waves.

Premna latifolia Roxb. Fl. Ind. 3:76. 1832 var. *latifolia* Brown 139; FBI 4:577; FPM 767; Mayur. 229; H.N.Moldenke & A.L.Moldenke in Dassan. & Fosb. Handb.Fl.Ceylon 4:317. 1983.

Shrubs, up to 4 m tall; older stems sometimes thorny. Leaves 6-10 x 3-6 cm, ovate to elliptic-ovate, base subcordate to obtuse. Flowers c. 3 mm across, in terminal, corymbose cymes; calyx bilipped; corolla pubescent at throat. Drupes c. 7 mm across.

In scrub jungles; rare. Fl. & Fr.: March-May.

Premna latifolia Roxb. var. *viburnoides* (Wall.) Clarke in Hook.f.Fl.Brit. India 4:578. 1885; FPM 767; Mayur. 229; H.N.Moldenke & A.L.Moldenke 323.

Shrubs, up to 6 m tall. Leaves 4-8 x 3-5 cm, ovate to ovate-lanceate or ovate-oblong, serrate to entire, base cuneate to obtuse. Flowers c. 3 mm across, greenish white, in terminal panicles; calyx 2-lipped; corolla c. 5 mm long, densely bearded within. Drupes c. 6 mm across.

Occasionally cultivated in gardens. Fl. & Fr.: March-June.

Premna tomentosa Willd. Sp.Pl. ed. 4.3:314. 1800; FBI 4:576; FPM 767; Mayur. 229; H.N.Moldenke & A.L.Moldenke 329.

Trees, up to 10 m tall. Leaves 4-20 x 3-18 cm, cordate to ovate, yellow-tomentose, entire, apex acute to acuminate. Flowers c. 4 mm across, pale yellow, in terminal and axillary, cymose panicles. Drupes c. 6 mm across, subglobose.

In scrub jungles; rare. Fl. & Fr.: March-June.

Stachytarpheta Vahl (nom.cons.)

Stachytarpheta jamaicensis (L.) Vahl, Enum. Pl. 1:206. 1804; Brown 137. *Verbena jamaicensis* L. Sp.Pl.19. 1753. *Stachytarpheta indica* auct. non (L.) Vahl 1804; FBI 4:564; FPM 763; Mayur. 226.

Herbs, up to 60 cm tall. Leaves 3-8 x 1.5-5 cm, ovate-elliptic, glabrous, coarsely serrate. Flowers c. 8 mm across, blue, in terminal spikes up to 30 cm long. Fruits splitting into 2 nutlets.

A weed of roadsides and other waste places; fairly common. Fl. & Fr.: November-April.

Tectona L.f.

Tectona grandis L.f. Suppl. Pl.151.1781; FBI 4:570; FPM 765; FTN 2:169.

Trees, up to 18 m tall. Leaves 15-30 x 8-15 cm, obovate-elliptic, coriaceous, scabrous. Flowers c. 1 cm across, white, in terminal panicles. Capsules inflated.

Commonly cultivated for timber. Tamil: Theykku. English: The Teak.

Vitex L.

- | | | |
|--|---------|---------------------|
| 1. Petioles winged | .. .. . | <i>V. altissima</i> |
| 1. Petioles not winged: | | |
| 2. Leaflets 3-5, petiolulate | .. .. . | <i>V. negundo</i> |
| 2. Leaflets 1-3, sessile or subsessile | .. .. . | <i>V. trifolia</i> |

Vitex altissima L.f. Suppl. Pl.294. 1781; FBI 4:584; FPM 772; Barnes 33; H.N.Moldenke & A.L.Moldenke in Dassan. & Fosb. Rev. Handb.Fl.Ceylon 4:353. 1983.

Trees, up to 15 m tall. Leaves 3-foliolate; leaflets 5-15 x 2-5 cm, elliptic or obovate-elliptic, apex acuminate. Flowers purplish-pink, in terminal and axillary panicles; corolla c. 6 mm long. Drupes c. 8 mm across.

In scrub jungles; rare. Fl.: July-September. Fr: September-January.

Vitex negundo L.Sp.Pl. 638. 1753; Brown 142; FBI 4:583; FPM 771; Mayur. 228; H.N.Moldenke & A.L.Moldenke 373.

Shrubs or trees, up to 6 m tall. Leaflets 4-12 x 1-4 cm, lanceate to oblong-elliptic. Flowers pale blue, in terminal and axillary panicles; corolla c. 1.3 cm long. Drupes c. 8 mm across.

In thickets and jungles, also cultivated as a hedge plant; common. Fl. & Fr.: throughout the year.

Vitex trifolia L.Sp.Pl. 638. 1753; Brown 141; FBI 4:583; FPM 771; Mayur. 228; H.N.Moldenke & A.L.Moldenke 378.

Shrubs, up to 5 m tall. Leaflets 2-6 x 1-3 cm, oblong-elliptic to oblanceate or obovate. Flowers pale blue or purplish, in terminal and axillary panicles. Drupes c. 6 mm across.

Occasionally cultivated as a hedge plant. Fl. & Fr.: throughout the year.

AVICENNIACEAE

Avicennia L.

Avicennia marina (Forssk.) Vierh. Denkschr. Kaiserl. Akad. Wissensch. Wien Math.-Naturwiss. Wiss. 71:435. 1907; FPM 774; H.N.Moldenke & A.L.Moldenke in Dassan. & Fosb. Rev. Handb.Fl.Ceylon 4:127. 1983. *Sceura marina* Forssk. Fl. Aegypt.-Arab. 2:37. 1775.

Shrubs or trees, up to 10 m tall. Leaves 4-9 x 2-4 cm, elliptic or elliptic-lanceate, coriaceous, glabrous. Flowers c. 5 mm across, yellow, in terminal and axillary, capitate panicles. Fruits up to 2.5 x 2 cm, ovoid.

Along backwaters near seashores; locally abundant. Fl. Fr.: June-September.

LAMIACEAE

(LABIATAE)

- | | | |
|---|---------|--------------------|
| 1. Posterior calyx lobe decurrent on tube: | | |
| 2. Calyx as long as corolla tube: | | |
| 3. Floral leaf with a concave, glandular receptacle at base | .. .. . | <i>Becium</i> |
| 3. Floral leaf without a concave, glandular receptacle at base | .. .. . | <i>Ocimum</i> |
| 2. Calyx shorter than corolla tube | .. .. . | <i>Orthosiphon</i> |
| 1. Posterior calyx lobe not decurrent on tube: | | |
| 4. Posterior calyx lobe sharply bent down concealing the mouth in fruit | .. .. . | <i>Anisochilus</i> |
| 4. Posterior calyx lobes not as above: | | |
| 5. Upper lip of corolla larger than lower lip, 4-lobed: | | |
| 6. Corolla blue | .. .. . | <i>Hyptis</i> |
| 6. Corolla not blue: | | |
| 7. Stems with minute, white prickles | .. .. . | <i>Basilicum</i> |
| 7. Stems without minute white prickles | .. .. . | <i>Geniosporum</i> |
| 5. Upper lip of corolla smaller than lower lip, entire: | | |
| 8. Posterior calyx tooth spine-tipped | .. .. . | <i>Leonotis</i> |
| 8. Posterior calyx tooth not spine-tipped: | | |
| 9. Corolla purplish | .. .. . | <i>Anisomeles</i> |
| 9. Corolla white | .. .. . | <i>Leucas</i> |

Anisochilus Wall. ex Benth.

Anisochilus carnosus (L.f.) Wall. ex. Benth. var. **eriocephalus** (Benth.) Paul in New Botanist 6: 45. 1979. *A. eriocephalus* Benth. in DC. Prodr. 12:81. 1848; FPM 788; Barnes 34; FTN 2:172.

Herbs, up to 40 cm tall. Leaves 1.5-3.5 x 1.7-4 cm, broadly ovate, semisucculent, finely glandular-pubescent beneath, crenate. Flowers c. 1 cm across, purplish-violet, in dense, terminal spikes. Nutlets c. 1 mm long, ovoid, black.

A weed of rock crevices; very rare. Fl. & Fr.: December-March.

Anisomeles R.Br.

Leaves ovate; stems acutely 4-angled	.. .. .	<i>A. indica</i>
Leaves lanceate to lanceate-elliptic; stems obtusely 4-angled	.. .. .	<i>A. malabarica</i>

Anisomeles indica (L.) Kuntze, Rev. Gen.Pl. 512. 1891; FPM 797; Mayur. 235; Keng in Steenis, Fl. Males.ser. 1.8:329. 1978; Cramer in Dassan. & Fosb. Rev.Handb. Fl.Ceylon 3:176. 1981. *Nepeta indica* L.Sp.Pl. 571. 1753. *Anisomeles ovata* R.Br. in Ait.Hort. Kew ed. 2.3:364. 1811; Brown 135; FBI 4:672.

Aromatic herbs, up to 1.5 m tall. Leaves 3-10 x 2.5-9 cm. Floral leaves up to 8 x 1 mm, linear to subulate; calyx tube 10-nerved; corolla c. 1.5 cm long, pale violet. Nutlets ellipsoid.

A weed of waste places; fairly common. Fl.& Fr.: throughout the year.

Anisomeles malabarica (L.) R.Br. ex Sims.in Curtis. Bot.Mag.t.2071. 1819; Brown 136; FBI 4:673; FPM 797; Mayur. 235; Mukerjee in RBSI 14(1):153. 1940; Keng 329;Cramer 178. *Nepeta malabarica* L.Mant. Alt.566. 1771.

Aromatic undershrubs, up to 1 m tall, white-tomentose. Leaves 8-10 x 1-3 cm, crenate-serrate. Floral leaves up to 1 cm long; corolla c. 1.8 cm long, pale violet. Nutlets ovoid.

A weed of waste places; fairly common. Fl. & Fr.: throughout the year.

Basilicum Moench

Basilicum polystachyon (L.) Moench, Suppl. Meth. 143. 1802; Keng in Steenis, Fl.Males. ser. 1.8:366. 1978. *Ocimum polystachyon* L.Mant.Alt.567. 1771. *Moschosma polystachyum* (L.) Benth. in Wall.Pl. As.Rar. 2:13. 1830-31; FBI 4:612; FPM 782.

Herbs, up to 60 cm tall; stems 4-angled. Leaves 2-5 x 1.5-3 cm, ovate to ovate-rhomboid, margin crenate-serrate. Inflorescences 5-6 cm long; verticils closely packed; corolla c. 3 mm long, pinkish-white. Nutlets ellipsoid.

A weed of rice fields and other moist places; rare. Fl. & Fr.: throughout the year.

Becium Lindl.

Becium filamentosum (Forssk.) Chiov. Nuovo Giorn. Bot. Ital. (n.s.) 26:162. 1919; Harley in Kew Bull. 38:56. 1983. *Ocimum filamentosum* Forssk. Fl. Aegypt.-Arab. 108. 1775. *O. adscendens* Willd. Sp.Pl. 3:166. 1800; FBI 4:609; FPM 78; Mayur. 234.

Herbs, up to 30 cm tall; stems obtusely 4-angled. Leaves 1-4 x 0.5-1.5 cm, ovate-oblong. Inflorescences 4-6 cm long; verticils distant; floral leaves caducous, leaving the basal gland; corolla 6-7 mm long; stamens more than twice the length of corolla. Nutlets globose.

A weed of waste places; rare. Fl. & Fr.: throughout the year.

Geniosporum Wall. ex Benth.

Geniosporum tenuiflorum (L.) Merr. in Philipp. J. Sci. 19:379. 1921; Fischer in Bull. Misc. Inform. 1932:64. 1932; Santapau & Jain in Indian Forester 92:643. 1966. *Ocimum tenuiflorum* L. Sp.Pl. 597. 1753. *Geniosporum prostratum* (L.) Benth. In Edward's Bot. Reg. 15:sub.t.1300. 1830; FBI 4:610; FPM 781; Mayur. 232; Mukerjee in RBSI 14(1):33. 1940. *Ocimum prostratum* L. Mant. Alt. 566. 1771.

Prostrate or decumbent herbs. Leaves 2-4 x 0.5-0.6 cm, oblanceate-elliptic or ovate-elliptic, obscurely serrate. Flowers c. 2 mm across, purplish-violet, pedicellate, in dense, verticillate cymes. Nutlets minute.

A weed of moist places, also in fallow fields; common. Fl. & Fr.: December-April.

Hyptis Jacq. (nom.cons.)

Hyptis suaveolens (L.) Poit. in Ann.Mus. Natl. Hist. t. 7:472.t.29.f.2.1806; FBI 4:630; FPM 789; Mayur. 235; Keng in Steenis, Fl. Males. ser. 1.8:371. 1978. *Ballota suaveolens* L. Syst. Nat.ed. 10.1100. 1759.

Aromatic undershrubs, up to 1.5 m tall. Leaves 3-8 x 1-6 cm, ovate or subcordate. Flowers c. 4 mm across, in axillary, peduncled umbels; calyx teeth aristate; corolla c.6 mm long. Nutlets oblong.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Leonotis (Pers.) R.Br.

Leonotis nepetifolia (L.) R.Br. Prodr. 504. 1810; Brown 136; FBI 4:691; FPM 807; Mayur. 232; Mukerjee in RBSI 14(1):185. 1940; Keng in Steenis, Fl. Males.ser.1.8:335. 1978. *Phlomis nepetifolia* L. Sp.Pl.586. 1753.

Undershrubs, up to 2 m tall. Leaves 4-15 x 2-12 cm; lower leaves ovate; upper leaves ovate-lanceate. Verticils 3-6 cm across; floral leaves linear-lanceate; calyx 8-toothed; corolla 2-2.5 cm long, orange-red. Nutlets linear-cuneate.

A weed of waste places; rare. Fl. & Fr.: November-March.

Leucas R.Br.

- 1. Calyx mouth strongly oblique:
 - 2. Uppermost calyx tooth much longer than others *L. indica*
 - 2. Uppermost calyx tooth as long as others *L. aspera*
- 1. Calyx mouth almost straight:
 - 3. Leaves ovate *L. biflora*
 - 3. Leaves linear-oblong *L. diffusa*

Leucas aspera (Willd.) Link, Enum. Hort.Berol.Alt. 2:113. 1822; Brown 136; FBI 4:690; FPM 803; Mayur. 236; Keng in Steenis, Fl.Males ser. 1.8:337. 1978. *Phlomis aspera* Willd. Enum.Hort. Berol.Alt. 621. 1809.

Aromatic herbs, up to 40 cm tall. Leaves 2.5-7 x 0.3-0.6 cm, linear-oblong, pubescent. Flowers c. 1 cm long, white, in verticillate cymes; calyx tube pubescent without. Nutlets c. 1.5 mm long.

A weed of waste places along roadsides and railway tracks; common. Fl. & Fr.: throughout the year.

Leucas biflora (Vahl) Benth. in Wall. Pl.As.Rar. 1:62. 1830; FBI 4:683; FPM 804; Barnes 34; Mukerjee in RBSI 14(1):180. 1940; Cramer in Dassan. & Fosb. Rev.Handb.Fl.Ceylon 3:186. 1981. *Phlomis biflora* Vahl, Symb. Bot. 3:77. 1794.

Scandent herbs; branches up to 50 cm long. Leaves 1.5-4 x 1-2.5 cm, margin crenate-serrate. Verticils 2-4-flowered; calyx 10-toothed; corolla c. 1.5 cm long, white. Nutlets ovoid.

A weed of thickets and scrub jungles; rare. Fl. & Fr.: November-March.

Leucas diffusa Benth. Labiat. Gen.Sp. 615. 1834; FBI 4:689; FPM 804; Mayur. 236.

Prostrate or decumbent aromatic herbs. Leaves 1-3 x 0.3-0.5 cm, linear-oblong, margin entire. Verticils few, distant. Flowers c. 1.5 cm long, white. Nutlets c. 2 mm long.

A weed of waste places; common. Fl. & Fr.: August-April.

Leucas indica (L.) R.Br. ex Vatke, Oester.Bot.Z. 25:95. 1875; Rani & Matthew in Matthew. Fl. Tamilnadu Carnatic 3:1262. 1983. *Leonurus indicus* L. Syst.Nat. ed.10. 1101. 1759. *L. linifolia* (Roth) Spreng. Syst.Veg. ed.16. 2:743. 1825; FBI 4:690; FPM 803; Mayur. 236. *Phlomis linifolia* Roth, Nov. Pl.Sp.260. 1821.

Aromatic herbs, up to 40 cm tall. Leaves 4-7 x 0.3-0.6 cm, linear to linear-lanceate, pubescent. Verticils distant, few-flowered. Flowers c. 1.2 cm long, white; calyx tube almost glabrous, teeth obscure. Nutlets c. 1.5 mm long.

A weed of waste places along railway tracks and roadsides, also along bunds of rice fields; fairly common. Fl. & Fr.: August-December.

Leucas hirta (Heyne ex Roth) Spreng. Syst. Veg.ed. 16. 2:743. 1825; FBI 4:687; FPM 806; Mayur. 237. *Phlomis hirta* Heyne ex Roth. Nov.Pl.Sp. 264.1821.

Mayuranathan records this.

Ocimum L.

- | | | |
|--|---------|-----------------------|
| 1. Leaves acuminate at apex; upper calyx teeth longer than lower | .. .. . | <i>O. gratissimum</i> |
| 1. Leaves acute to obtuse at apex; upper calyx teeth shorter than lower: | | |
| 2. Leaves acute at apex; nutlets mucilaginous when wet: | | |
| 3. Corolla under 7 mm long | .. .. . | <i>O. canum</i> |
| 3. Corolla over 7 mm long | .. .. . | <i>O. basilicum</i> |
| 2. Leaves obtuse at apex; nutlets not mucilaginous when wet | .. .. . | <i>O. tenuiflorum</i> |

Ocimum basilicum L. Sp.Pl. 597. 1753; Brown 133; FBI 4:608; FPM 777; Mayur. 233; Morton in J. Linn. Soc.Bot. 58:234. 1962; Keng in Steenis, Fl. Males.ser. 1.8:377. 1978; Cramer in Dassan. & Fosb.Rev.Handb. Fl.Ceylon 3:115. 1981. *O. americanum* L. in Torner's Cent. Pl. 1:15. 1756.

Aromatic herbs, up to 60 cm tall; stems 4-angled. Leaves 3-6 x 1.5-2.5 cm, margin entire to distantly crenulate. Floral leaves c. 5 x 2.5 mm, ovate, ciliate; corolla c. 8 mm long, white tinged with pink. Nutlets ellipsoid, densely hairy.

Commonly cultivated in gardens and near temples. Fl. & Fr.: throughout the year.

Ocimum canum Sims.in Curtis, Bot. Mag. 51:t.2452. 1824; Brown 133; FBI 4:607; FPM 777; Mayur. 234; Cramer 114.

Aromatic herbs, up to 50 cm tall; stems 4-angled. Leaves 1.5-4 x 0.5-2.5 cm, ovate-lanceate to ovate-oblong. Floral leaves c. 4 x 2 mm, ovate, ciliate; pedicels curved; corolla 5-6 mm long, whitish. Nutlets ovoid, subtrigonal.

A weed of waste places; common. Fl. & Fr.: throughout the year. Tamil: Naaithulasi.

Ocimum gratissimum L.Sp.Pl. 1197. 1753; FBI 4:608; FPM 777; Mayur. 233; Mukerjee in RBSI 14(1):20. 1940; Morton 232; Keng 377; Cramer 112.

Undershrubs, up to 1.3 m tall; stems obtusely 4-angled. Leaves 4-10 x 2.5-8 cm, ovate. **Calyx mouth closed** after anthesis; corolla 5-7 mm long, greenish-white. Nutlets subglobose.

A weed of waste places, sometimes cultivated in medicinal gardens; rare. Fl. & Fr.: November-March.

Ocimum tenuiflorum L.Sp.Pl. 597. 1753; FTN 2:180. *O. sanctum* L.Mant. Pl.85. 1767; FPM 778; Mayur. 233.

Aromatic undershrubs, up to 1 m tall; stems obtusely angled. Leaves 1.5-3.5 x 1-2.2 cm, ovate-oblong. Floral leaves c. 2 x 3 mm, suborbicular, apex acuminate; upper lip of calyx strongly reflexed in fruit; corolla c. 4 mm long, pinkish-white. Nutlets ellipsoid, minutely warty.

Commonly cultivated around houses, also runs wild. Fl. & Fr.: throughout the year.

Orthosiphon Benth.

Corolla tube longer than calyx	.. .. .	<i>O. thymiflorus</i>
Corolla tube as long as calyx	.. .. .	<i>O. pallidus</i>

Orthosiphon pallidus Royle ex Benth. Lab.Gen. Sp.708. 1835; FBI 4:613; FPM 779; Mayur. 234.

Herbs, up to 30 cm tall. Leaves 1-1.5 x 0.6-1 cm, ovate, glabrous. Flowers c. 6 mm long, pale white, in verticils on peduncles up to 10 cm long. Nutlets c. 1 mm long.

A weed of jungles and thickets; very rare. Fl. & Fr.: September-March.

Orthosiphon thymiflorus (Roth) Sleesen in Reinwardtia 5:42. 1959; Keng in Steenis, Fl. Males.ser. 1.8:381. 1978. *Ocimum thymiflorum* Roth, Nov.Pl.Sp. 269. 1821. *Orthosiphon tomentosus* Benth. in Wall. Pl.As.Rar. 2:14. 1831; FBI 4:613. *O. glabratus* Benth. in Wall.Pl.As.Rar. 2:14. 1831; FPM 779; Mayur. 234.

Herbs, up to 60 cm tall. Leaves 3-6 x 2-4 cm, ovate to ovate-elliptic, puberulous. Inflorescences up to 15 cm long; verticils lax; floral leaves up to 3 x 2 mm, ovate; corolla c. 1 cm long, pale violet. Nutlets oblong-orbicular.

A weed of roadsides bordering scrub jungles; rare. Fl. & Fr.: July-September.

NYCTAGINACEAE

1. Plants armed	.. .. .	<i>Bougainvillea</i>
1. Plants unarmed:		
2. Perianth under 1 cm long	.. .. .	<i>Boerhavia</i>
2. Perianth over 2 cm long	.. .. .	<i>Mirabilis</i>

Boerhavia L.

Anthocarps glandular-pubescent	.. .. .	<i>B. diffusa</i>
Anthocarps glabrous	.. .. .	<i>B. erecta</i>

Boerhavia diffusa L.Sp.Pl. 3.1753; FPM 814; Mayur. 238; Stemm. in Steenis, Fl. Males. ser. 1.6:454. 1964. *B. repens* L.Sp.Pl. 3.1753; FBI 4:709.

Prostrate herbs; branches up to 1 m long. Leaves 2-5 x 2-4 cm, ovate, glaucous beneath, base truncate to subcordate. Flowers c. 2 mm across, rosy-pink, in capitate clusters on axillary, branched peduncles. Anthocarps up to 2.5 x 1 mm, ellipsoid.

A weed of waste places along railway tracks, roadsides etc.; common. Fl. & Fr.: throughout the year. Tamil: Chaattaranai.

Boerhavia erecta L.Sp.Pl. 3. 1753; Stemm. 454. *B. punarnava* Saha & Krishnamurthy in J. Sci. Industr. Res.21 C:254. 1961; Nair in BBSI 9:283. 1967.

Suberect herbs; branches up to 40 cm tall. Leaves 3-6 x 1-4 cm, ovate or ovate-lanceate, glaucous beneath, margin undulate. Flowers c. 2 mm across, pinkish-white, in sub-umbellate clusters on branched peduncles. Anthocarps up to 3 x 1 mm, obconic.

A weed of waste places along railway tracks; fairly common. Fl. & Fr.: throughout the year.

Bougainvillea Commers. ex Juss.

Bougainvillea spectabilis Willd. Sp.Pl. 2:348. 1799; Brown 149; FPM 815; Mayur. 237; BICS 269; Stemm. in Steenis, Fl.Males. ser. 1.6:457. 1964.

Straggling or climbing shrubs; branches with supra-axillary thorns. Leaves 4-10 x 2-7 cm, ovate. Flowers c. 8 mm across, in compound dichasia; bracts 4-5 x 3-4 cm, pink, red, white or yellow, ovate; perianth tubular.

Commonly cultivated in gardens as an ornamental. Fl.: throughout the year. Tamil: Kaahithappoo. Native of Brazil.

Mirabilis L.

Mirabilis jalapa L.Sp.Pl. 177. 1753; Brown 149; FPM 815; Mayur. 237; Stemm. in Steenis, Fl.Males.ser. 1.6:451. 1964.

Herbs, up to 60 cm tall, falsely dichotomous. Leaves 5-13 x 3-8 cm, ovate. Flowers c. 2.5 cm across, pink, white or yellow, in terminal cymes; bracts 5, connate below and calyx-like. Achenes c. 8 mm across, black.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year. Tamil: Anthimantharai. English: Four O' Clock Plant. Native of S. America.

AMARANTHACEAE

1. Leaves alternate:

2. Fertile flower subtended by 2 sterile flowers

.. .. *Digera*

2. Fertile flower not subtended by sterile flowers:

3. Ovaries 1-ovuled:

4. Flowers unisexual

.. .. *Amaranthus*

4. Flowers bisexual:

5. Pseudostaminodes present

.. .. *Aerva*

5. Pseudostaminodes absent:

6. Stamens 1-2

.. .. *Nothosacra* p.p.

6. Stamens 3-5

.. .. *Allmania*

3. Ovaries many-ovuled

.. .. *Celosia*

1. Leaves opposite:

7. Fertile flowers surrounded by modified sterile flowers bearing hooked spines

7. Fertile flowers not surrounded by modified sterile flowers bearing hooked spines

.. .. *Pupalia*

- | | | |
|---|---------|-------------------------|
| 8. Filaments fused almost to top | .. .. . | <i>Gomphrena</i> |
| 8. Filaments distinct or fused only at base: | | |
| 9. Pseudostaminodes present: | | |
| 10. Leaves linear-filiform | .. .. . | <i>Trichuriella</i> |
| 10. Leaves other than linear-filiform: | | |
| 11. Inflorescence mostly a head, much shorter than leaves | .. .. . | <i>Alternanthera</i> |
| 11. Inflorescence a spike, much longer than leaves | .. .. . | <i>Achyranthes</i> |
| 9. Pseudostaminodes absent: | | |
| 12. Stamens 1-2 | .. .. . | <i>Nothosaerva p.p.</i> |
| 12. Stamens 5 | .. .. . | <i>Psilotrichum</i> |

Achyranthes L.

Achyranthes aspera L.Sp.Pl. 204. 1753; Brown 152; FBI 130; FPM 823; Mayur. 243; Backer in Steenis, Fl. Males. ser. 1.4: 88. 1949; Towns. in Dassan. & Fosb.Rev. Handb. Fl. Ceylon. 1:38. 1980.

Herbs or undershrubs, up to 60 cm tall. Leaves 3-7 x 2-5 cm, obovate, base cuneate. Flowers c. 5 mm long, purplish-green. Fruits c. 2 mm across.

A weed of waste places; common. Fl. & Fr.: throughout the year. Tamil: Naayuruvi.

Aerva Forssk. (nom.cons.)

- | | | |
|---|---------|-------------------------|
| 1. Plants greenish, wild: | | |
| 2. Leaves obovate to suborbicular | .. .. . | <i>A. lanata</i> |
| 2. Leaves oblanceate to oblong-elliptic | .. .. . | <i>A. javanica</i> |
| 1. Plants purplish-red, cultivated | .. .. . | <i>A. sanguinolenta</i> |

Aerva javanica (Burm.f.) Juss. ex Schult. Syst.Veg. 965. 1819; Brown 151; FBI 4:727; Towns. in Dassan. & Fosb.Handb. Fl.Ceylon 1:31. 1980. *Iresine javanica* Burm.f. Fl. Ind. 212.t.65.f.2. 1768. *Aerva tomentosa* Forssk. Aegypt.-Arab. 122:170. (& Florula 122). 1775; FPM 824; Mayur. 239.

Undershrubs, up to 1.2 m tall. Leaves 4-9 x 1-2.5 cm, white-tomentose, base attenuate. Flowers c. 2 mm long, whitish, in long, terminal and axillary spikes. Utricles c. 1.5 mm across.

A weed of sandy seashores; rare. Fl. & Fr.: throughout the year.

Aerva lanata (L.) Juss. in Ann. Mus.Hist. Nat. 1:131. 1808; Brown 151; FBI 4:728; FPM 825; Mayur. 239; Towns. 32. *Achyranthes lanata* L.Sp.Pl.204. 1753.

Undershrubs, up to 60 cm tall. Leaves 1.5-3 x 1-2 cm, base attenuate. Flowers c. 1.5 mm long, greenish-white, in axillary spikes up to 1.4 cm long. Utricles c. 1 mm across.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Aerva sanguinolenta (L.) Blume, Bijdr. 547. 1826. *Achyranthes sanguinolenta* L. Sp.Pl. ed.2.294. 1762. *Aerva scandens* (Roxb.) Wall. ex Moq. in DC.Prodr. 13(2):302. 1849; FBI 4:727; FPM 825. *Achyranthes scandens* Roxb. Fl.Ind. 2:509. 1824.

Straggling undershrubs. Leaves 2-7 x 0.8-3 cm, elliptic to obovate-spatulate, densely puberulous, base attenuate, apex acute. Flowers c. 2 mm across, white, in terminal and axillary spikes. Utricles c. 2 mm across.

Commonly cultivated in gardens as a border plant; propagated by cuttings. Fl. & Fr.: February-April.

Allmania R.Br. ex Wight

Allmania nodiflora (L.) R.Br. ex Wight in Hook. J.Bot. 1:227. t.128. 1834; FBI 4:716; FPM 817; Mayur. 242; Backer in Steenis, Fl. Males.ser. 1.4:74. 1949. *Celosia nodiflora* L.Sp.Pl. 205. 1753.

Prostrate or erect herbs, up to 60 cm tall. Leaves variable in size and shape, 1.5-8 x 0.4-2 cm, linear, lanceate-elliptic to obovate-orbicular. Heads leaf-opposed or terminal, sessile or peduncled. Flowers c. 5 mm long, greenish to brownish. Fruits c. 2 mm across.

A weed of fallow fields and other open grounds, also on sandy seashores; common. Fl. & Fr.: July-March.

Alternanthera Forssk.

- | | | |
|--|---------|--------------------------|
| 1. Plants with reddish tinge, cultivated | .. .. . | <i>A. bettzickiana</i> |
| 1. Plants without reddish tinge, wild: | | |
| 2. Herbs straggling | .. .. . | <i>A. tenella</i> |
| 2. Herbs prostrate: | | |
| 3. Inflorescences spinescent | .. .. . | <i>A. pungens</i> |
| 3. Inflorescences not spinescent: | | |
| 4. Young stems and leaves pubescent | .. .. . | <i>A. paronychioides</i> |
| 4. Young stems and leaves glabrous | .. .. . | <i>A. sessilis</i> |

Alternanthera bettzickiana (Regel) Nicols. in Gard. Dict. ed. 1.59. 1884; Backer in Steenis, Fl.Males. ser. 1.6:916. 1972. *Telanthera bettzickiana* Regel in Gartenflora 11:78. 1862.

Decumbent or spreading herbs. Leaves 1.5-5 x 0.5-1.5 cm, spatulate-rhomboid or spatulate-elliptic, veins puberulous beneath. Flowers c. 2.5 mm long, white; bracts and tepals aristate at apex, with white hairs. Fruits c. 1 mm across.

Commonly cultivated in gardens as a border plant. Fl. & Fr.: throughout the year.

Leaves used as greens. Tamil: Seemaipponna kanni. Native of tropical America.

Alternanthera paronychioides St. Hil.Voy. Bres.2(2):439. 1833; Sundararaj in JBNHS 53:525. 1956; Veldk. in Blumea 19:167. 1971; Backer 916; Towns. in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 1:50. 1980.

Prostrate herbs, rooting at nodes; roots usually stout. Leaves 10-35 x 5-10 mm, obovate, spatulate or elliptic, base attenuate. Heads axillary; flowers c. 3.5 mm long, whitish. Fruits c. 2 mm across.

A weed of railway tracks, dried up ponds etc.; fairly common. Fl. & Fr.: January-June. Native of tropical America.

Alternanthera pungens Kunth in HBK. Nov. Gen. Sp. 2:206. 1817; Melville in Kew Bull. 12:178. 1958; Towns. 47. *A. echinata* Sm. in Rees, Cyclop.-Suppl. no.10. 1819; Mayur. 245.

Prostrate herbs, rooting at lower nodes. Leaves 2-4 x 0.5-2.5 cm, ovate, rhomboid-ovoid or obovate-orbicular. Heads axillary, globose or subspicate; flowers c. 5 mm long. Fruits c. 1 mm across.

A weed of sandy seashores and other waste places; common. Fl. & Fr.: December-July. Native of tropical America.

Alternanthera sessilis (L.) R.Br. ex DC. Cat. Pl. Hort. Monsp. 4:77. 1813; Brown 153; FBI 4:731; Backer 92; Towns. 49. *Gomphrena sessilis* L. Sp. Pl. 225. 1753. *Alternanthera triandra* Lam. Encycl. 1:95. 1783; FPM 825; Mayur. 245.

Prostrate or decumbent herbs, often rooting at nodes. Leaves 1-5 x 0.3-1.3 cm, linear, lanceate-elliptic or obovate-elliptic. Heads axillary, globose or subspicate. Flowers c. 2.5 mm long. Fruits c. 1 mm across.

A semiaquatic weed of moist soil, ditches, canals etc.; very common. Fl. & Fr.: throughout the year.

Leaves used as greens. Tamil: Ponnaankanni keerai.

Alternanthera tenella Colla in Mem. Acc. Torin. 33:131. 1829. *A. ficoides* auct. non (L.) R.Br. ex Roem. & Schult. 1819; Babu, Herb. Fl. Dehra Dun 427. 1977. - Plate 22 A-F.

Stems many-branched. Leaves 3-7 x 0.6-2.5 cm, linear to lanceate or elliptic, sparsely pubescent. Flowers c. 4 mm across, greenish, in dense, axillary heads; fertile stamens 5, alternating with 5 pseudostaminodes, monadelphous. Fruits c. 1 mm across.

A terrestrial or semiaquatic weed along canals, ditches and fallow fields, also on barren land; locally abundant. Fl. & Fr.: throughout the year.

Leaves used as green vegetable. Native of Brazil.

Amaranthus L.

- | | | |
|--|---------|-------------------------|
| 1. Plants armed | .. .. . | <i>A. spinosus</i> |
| 1. Plants unarmed: | | |
| 2. Inflorescences always axillary: | | |
| 3. Bracts and bracteoles ovate or deltoid | .. .. . | <i>A. tricolor</i> p.p. |
| 3. Bracts and bracteoles lanceate-oblong | .. .. . | <i>A. roxburghianus</i> |
| 2. Inflorescences terminal and from upper axils: | | |
| 4. Fruits dehiscent transversely | .. .. . | <i>A. tricolor</i> p.p. |
| 4. Fruits indehiscent or irregularly dehiscent | .. .. . | <i>A. viridis</i> |

Amaranthus roxburghianus Nevski in Trudy Bot. Inst. Akad. Nauk. SSSR. ser. 1 Fl. Sist. Vyss. Rast. 4:311. 1937; FTN 2:191. *A. polygamus* auct. non L. 1755; FPM 820; Mayur. 241.

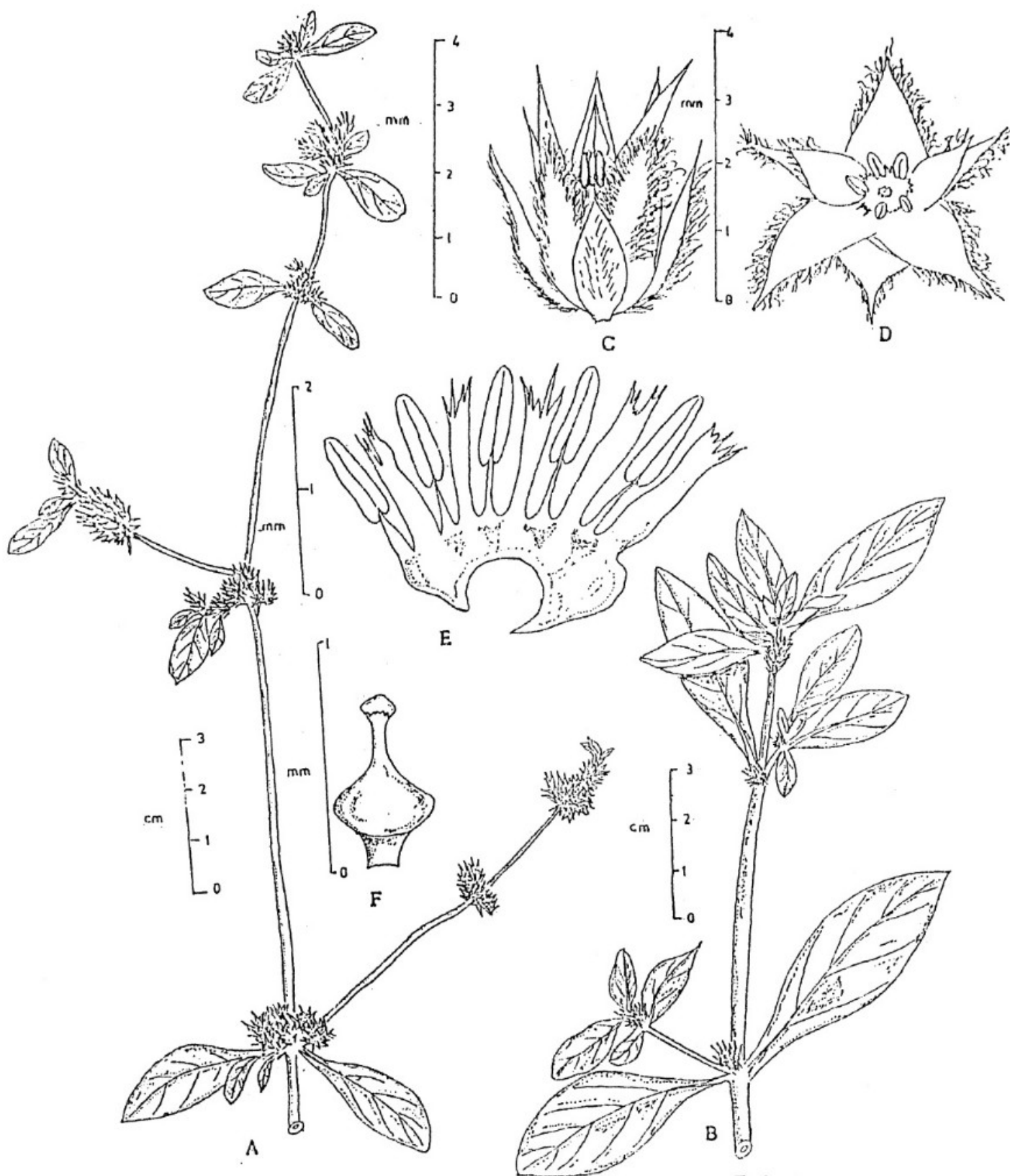


PLATE 22: *Alternanthera tenella* Colla A & B - Twigs.
C & D - Flowers. E - Androecium. F - Gynoecium.

Herbs, up to 60 cm tall. Leaves 2-8 x 0.6-4 cm, obovate-elliptic to oblanceate-elliptic or rhomboid-elliptic, base attenuate. Flowers c. 2 mm long, greenish. Fruits c. 1.5 mm across, apex beaked.

Commonly cultivated in fields and kitchen gardens. Fl. & Fr.: throughout the year.

Leaves used as greens. Tamil: Sirukeerai.

Amaranthus spinosus L.Sp.Pl. 991. 1753; Brown 151; FBI 4:718; FPM 819; Mayur. 241; Backer in Steenis, Fl.Males.ser. 1.4:78. 1949; Towns.9.

Herbs, up to 1.5 m tall, with pairs of axillary spines. Leaves 2-10 x 1-5 cm, ovate, rhomboid-elliptic or lanceate. Flowers c. 2 mm long, in terminal and axillary spikes. Fruits c. 1 mm across.

A weed of waste places along railway tracks and roadsides; common. Fl. & Fr.: throughout the year.

Leaves occasionally used as greens. Tamil: Mullukkeerai.

Amaranthus tricolor L.Sp.Pl. 989. 1753; Brown 151; Backer 77; Towns. 15. *A. gangeticus* L.Syst. Nat.ed.10. 1268. 1759; FBI 4:719; FPM 819.

Prostrate or erect herbs, up to 1 m tall. Leaves 1-8 x 0.5-5 cm, elliptic, rhomboid or ovate, greenish or purplish. Flowers c. 4 mm long, greenish or purplish. Fruits c. 2.5 mm across.

Commonly cultivated, also runs wild. Fl. & Fr.: throughout the year.

Leaves used as greens. Tamil: Thanduk keerai.

Amaranthus viridis L.Sp.Pl.ed. 2.1405. 1763; FBI 4:720; FPM 820; Mayur. 241; Towns. 19.

Prostrate or erect herbs, up to 60 cm tall. Leaves 3-6 x 2-5 cm, deltoid-ovate to rhomboid-oblong, base truncate to shortly cuneate. Flowers c. 1.5 mm long, purplish-green. Fruits c. 1 mm across.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Leaves used as greens. Tamil: Kuppaikeerai.

Amaranthus caudatus L.Sp.Pl.990. 1753; Brown 151; FBI 4:719; FPM 819; Mayur. 241; Backer 80; Towns. 14.

Mayuranathan records this as cultivated.

Celosia L.

Leaves linear to lanceate-oblong

.. .. .

C. argentea

Leaves ovate to deltoid

.. .. .

C. polygonoides

Celosia argentea L.Sp.Pl.205. 1753; Brown 150; FBI 4:714; FPM 816; Mayur. 240; Towns. in Dassan. & Fosb. Rev.Handb. Fl. Ceylon 1:3. 1980.

Herbs, up to 1.5 m tall. Leaves 2-10 x 0.5-3 cm, upper ones gradually become smaller. Flowers c. 8 mm long, white to pinkish, in dense, terminal spikes. Capsules c. 3 mm across.

A weed of fallow fields and gardens; fairly common. Fl. & Fr.: December-April.

Leaves used as greens. Tamil: Pannai keera.

Celosia polygonoides Retz. Obs. Bot. 2:12. 1781; FBI 4:715; FPM 817; Mayur. 240; Towns. 5.

Prostrate or erect herbs, up to 25 cm tall; stems slightly woody at base. Leaves 1-3.5 x 1-3 cm, base shortly cuneate or subtruncate. Flowers c. 2 mm long, pinkish-white, in lax, terminal, spicate inflorescences. Capsules c. 2 mm across.

A weed of rocky areas, particularly around temples; rare. Fl. & Fr.: throughout the year.

Digera Forssk.

Digera muricata (L.) Mart. Beitr. Amarantac. 77. 1825; Towns. in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:23. 1980. *Achyranthes muricata* L. Sp. Pl. ed. 65. 1775; FBI 4:717; FPM 818; Mayur. 242.

Herbs, up to 60 cm tall. Leaves 2-6 x 1-4 cm, ovate to suborbicular, apex acute to acuminate. Flowers c. 4 mm long, pinkish, in long, axillary, spicate inflorescences. Fruits c. 2 mm across.

A weed of moist, cultivated fields; rare. Fl. & Fr.: throughout the year.

Gomphrena L.

Plants decumbent; flowers greenish-white

.. .. . *G. serrata*

Plants erect; flowers rosy-pink

.. .. . *G. globosa*

Gomphrena globosa L. Sp. Pl. 224. 1753; Brown 152; FBI 4:732; FPM 825; Mayur. 246; Towns. 55.

Herbs, much-branched and bushy, up to 50 cm tall. Leaves 2-10 x 1.5-4 cm, oblong-elliptic to lanceate or oblong. Flowers c. 8 mm long, in globose heads. Fruits c. 2.5 mm across.

Commonly cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year. Tamil: Vaadaa malli. Native of tropical America.

Gomphrena serrata L. Sp. Pl. 224. 1753; FTN 2:192. *G. decumbens* Jacq. Hort. Schoenbr. t. 482. 1805; FPM 825; Mayur. 246.

Branches up to 25 cm long. Leaves 2-4 x 1-1.5 cm, oblong-elliptic to oblanceate, apex mucronate. Flowers c. 5 mm long, in dense capitate to subcylindric spikes. Fruits c. 1.5 mm across.

A weed of waste places along railway tracks, roadsides etc.; common. Fl. & Fr.: throughout the year. Native of South America.

Nothosaerva Wight

Nothosaerva brachiata (L.) Wight, Ic. 6:1. 1853; FBI 4:726; FPM 823; Mayur. 244; Towns. in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:34. 1980.

Herbs, up to 50 cm tall. Leaves 5-40 x 3-20 mm, elliptic to ovate or elliptic-oblong. Flowers c. 1 mm long, whitish, in axillary or terminal, short spikes. Fruits c. 0.7 mm across.

A weed of moist places and gardens; rare. Fl. & Fr.: October-March.

Psilotrichum Blume

Psilotrichum elliotii Baker & Clarke in Oliver, Fl. Trop. Africa 6(1):58. 1909; Verdc. in Kew Bull. 17:492. 1964. *P. calceolatum* Moq. in DC. Prodr. 13(2):280. 1849 *nom. nud.*; FBI 4:725; FPM-822; Mayur. 244.

Prostrate or scrambling herbs, slightly woody at base. Leaves 1-4 x 0.6-2 cm, ovate or ovate-oblong. Spikes 1-3 cm long, axillary or terminal. Flowers c. 3 mm long, greenish-white. Fruits c. 1.5 mm across.

A weed of shady places; very rare. Fl. & Fr.: December-March.

Pupalia Juss. (nom.cons.)

- | | | |
|---|---------|---|
| 1. Spines of sterile flowers purplish | .. .. . | <i>P. lappacea</i> var. <i>lappacea</i> |
| 1. Spines of sterile flowers yellowish: | | |
| 2. Stems prostrate; leaves suborbicular | .. .. . | <i>P. lappacea</i> var. <i>orbiculata</i> |
| 2. Stems erect; leaves elliptic | .. .. . | <i>P. lappacea</i> var. <i>velutina</i> |

Pupalia lappacea (L.) Juss. in Ann. Mus. Natl. Hist. Nat. 2:132. 1803 var. *lappacea*; Towns. in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 1:29. 1980. *Achyranthes lappacea* L. Sp. Pl. 204. 1753. *Pupalia atropurpurea* (Lam.) Moq. in DC. Prodr. 13(2):331. 1849; FBI 4:723; FPM 821; Mayur. 243. *Achyranthes atropurpurea* Lam. Encycl. 1:546. 1785. - Plate 23 A-D.

Scrambling herbs or undershrubs. Leaves 4-8 x 2-4 cm, elliptic or ovate-elliptic, glabrous. Inflorescences up to 15 cm long, terminal. Burrs c. 9 mm across.

A weed of thickets and jungles; rare. Fl. & Fr.: November-March.

Pupalia lappacea (L.) Juss. var. *orbiculata* (Heyne ex Wall.) Towns. in Kew Bull. 29(3):469. 1974 & in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 29. *Achyranthes orbiculata* Heyne ex Wall. in Roxb. Fl. Ind. 2:507. 1824. *Pupalia orbiculata* (Heyne ex Wall.) Wight, Ic. 5:4.t. 1783. 1852; FPM 821; Mayur. 243.

Branches up to 1.5 m long. Leaves 3-6 x 2.5-5.5 cm, closely pilose, apex apiculate. Inflorescences up to 20 cm long. Burrs c. 15 mm across.

A weed of sandy seashores; rare. Fl. & Fr.: November-April.

Pupalia lappacea (L.) Juss. var. **velutina** (Moq.) Hook.f. Fl. Brit. India 4:724. 1885; FPM 821. *Aerva velutina* Moq. in DC. Prodr. 13(2):301. 1849. *Pupalia lappacea* auct. non (L.) Juss. 1803; FBI 4:724; FPM 821; Mayur. 243.

Subshrubs, up to 1.5 m tall. Leaves 4-10 x 2-5 cm, densely tomentose. Inflorescences up to 20 cm long. Burrs c. 12 mm across.

In scrub jungles, particularly on rocky slopes; fairly common. Fl. & Fr.: November-April.

Trichuriella Bennet

Trichuriella monsoniae (L.f.) Bennet in Indian J. Forestry 8:86. 1985. *Illecebrum monsoniae* L.f. Suppl. Pl. 161. 1781. *Trichurus monsoniae* (L.f.) Towns. in Kew Bull. 29:466. 1974; FTN 2:194. *Aerva monsoniae* (Retz.) Mart. Nov. Act. Acad. Caes. Leop. - Carol. Nat. Cur. 13:291. 1826; FPM 825; Mayur. 239. *Celosia monsoniae* Retz. Obs. Bot. 2:13. 1781.

Prostrate or ascending herbs, up to 40 cm long; stems wiry. Leaves 10-25 x 1-2 mm, crowded below and whorled or opposite above. Flowers c. 2.5 mm long, pinkish or greenish, in dense axillary or terminal spikes. Fruits c. 1 mm across.

A weed of sandy river beds or on moist soil in scrub jungles; rare. Fl. & Fr.: October-March.

CHENOPODIACEAE

1. Stems jointed; leaves absent:

- | | | |
|--|---------|---------------------|
| 2. Inflorescences similar to vegetative branches | .. .. . | <i>Salicornia</i> |
| 2. Inflorescences different from vegetative branches (cone-like) | .. .. . | <i>Arthrocnemum</i> |

1. Stems not jointed; leaves present:

- | | | |
|-------------------------------------|---------|-----------------|
| 3. Leaves subterete to linear | .. .. . | <i>Suaeda</i> |
| 3. Leaves ovate-elliptic or obovate | .. .. . | <i>Atriplex</i> |

Arthrocnemum Moq.

Arthrocnemum indicum (Willd.) Moq. Chenop. Monogr. Enum. 113. 1840; FBI 5:12; FPM 828; Mayur. 248; Backer in Steenis, Fl. Males. ser. 1.4:104. 1949. *Salicornia indica* Willd. Nova Acta Acad. Sci. Imp. Petrop. Hist. Nat. 5:111.t.4.f.1. 1799; Wood 277. - Plate 24 A.

Undershrubs, up to 60 cm tall; main stem prostrate; branchlets ascending, succulent, often pinkish. Flowers minute, 3 together, sunk in the axils of scaly bracts; bracteoles and perianth succulent; styles 2, exerted. Fruit an utricle.

A weed along backwaters and salt pans; locally abundant. Fl. & Fr.: December-May. Tamil: Pavalappoindu.

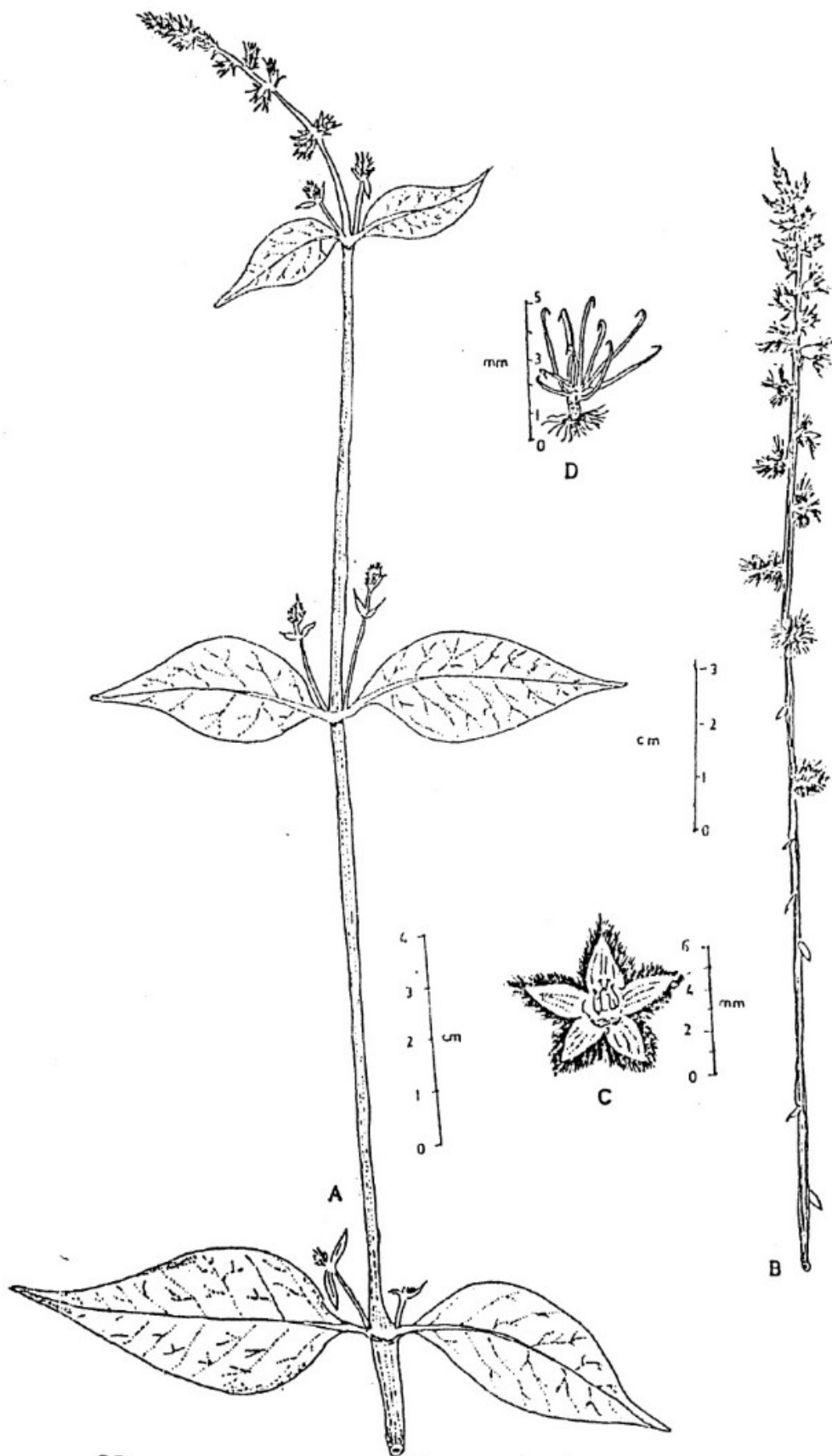


PLATE 23: *Pupalia lappacea* (L.) Juss. var. *lappacea* A - Twig.
B - Inflorescence. C - Fertile flower. D - Sterile flower.

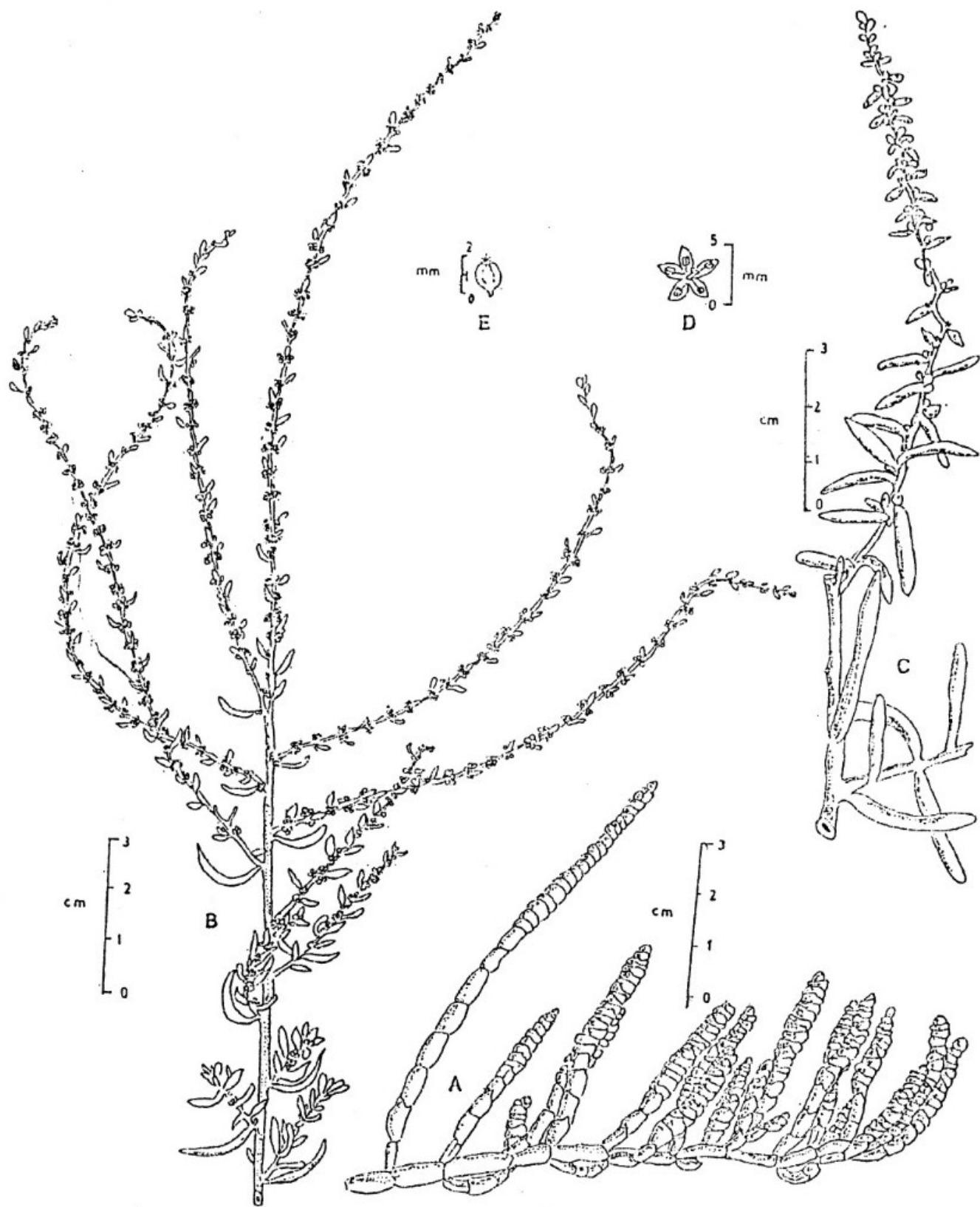


PLATE 24: A - *Arthrocnemum indicum* (Willd.) Moq. B - *Suaeda maritima* (L.) Dumort. C, D & E - *S. monoica* Forssk. ex Gmel. - (twig, staminate flower and pistillate flower).

Atriplex L.

Atriplex repens Roth, Nov.Pl.Sp.377. 1821; FBI 5:7; FPM 827; Mayur. 250.

Prostrate herbs, covered with minute, whitish scales. Leaves 1-2.5 x 0.5-1 cm, glaucous. Flowers unisexual, greenish, in terminal spikes. Fruit an utricle.

A weed along backwaters and salt pans; rare. Fl. & Fr.: July-October.

Salicornia L.

Salicornia brachiata Roxb. Fl. Ind. 1:84. 1820; Wood 277; FBI 2:12; FPM 828; Mayur. 248.

Erect herbs, up to 30 cm tall; branches green. Flowers minute, 3 together, sunk in cavities above the joints; stamen 1; stigmas 2. Fruit an utricle.

A weed along backwaters around Ennur; very rare. Fl. & Fr.: April-September. Tamil: Umarikkeerai.

Suaeda Forssk. ex Scop. (nom.cons.)

- | | | |
|--|---------|---------------------|
| 1. Leaves semiterete, curved | .. .. . | <i>S. maritima</i> |
| 1. Leaves linear, straight: | | |
| 2. Inflorescences with reduced leaves | .. .. . | <i>S. monoica</i> |
| 2. Inflorescences without reduced leaves | .. .. . | <i>S. nudiflora</i> |

Suaeda maritima (L.) Dumort.Fl. Belg. 22. 1827; FBI 5:14; FPM 829; Mayur. 249; Backer in Steenis, Fl.Males.ser. 1.4:105. 1949. *Chenopodium maritimum* L.Sp.Pl. 221. 1753. - Plate 24 B.

Undershrubs, up to 90 cm tall. Leaves 10-25 x 1.5-2.5 mm, succulent. Flowers c. 3 mm across, fascicled on spike-like inflorescences. Fruit an utricle.

A weed along backwaters and salt pans; common. Fl. & Fr.: December-May. Tamil: Umarikkeerai.

Suaeda monoica Forssk. ex Gmel. in Syst. Nat.ed.13. 2(1):503. 1791; FBI 5:13; FPM 829; Mayur. 249. - Plate 24 C-E.

Shrubs, up to 2 m tall. Leaves 10-40 x 3-5 mm, succulent, Flowers c. 3 mm across, greenish, in terminal, spike-like inflorescences. Fruit an utricle; seed black.

A weed along salt pans and backwaters; very rare. Fl. & Fr.: November-March.

Suaeda nudiflora Moq. in Ann. Sci.Nat. (Paris) 23:316. 1831 & in DC. Prodr. 13(2):155. 1849; FBI 5:14; FPM 829; Mayur. 249.

Undershrubs, up to 70 cm tall. Leaves 10-25 x 2-4 mm, succulent. Flowers c. 3 mm across, greenish; tepals 5; stamens 5; styles 3. Fruit an utricle; seed erect.

A weed along backwaters and salt pans around Ennur; fairly common. Fl. & Fr.: September-April.

Chenopodium L.

Chenopodium murale L.Sp.Pl. 219. 1753; FBI 5:4; FPM 827; Mayur. 250; Backer in Steenis, Fl. Males. ser. 1.4:101. 1949.

Mayuranathan records this as "an occasional weed near villages".

BASELLACEAE**Basella L.**

Basella alba L.Sp.Pl.272. 1753; Graham, Cat.Pl.Bombay 170. 1839; Brown 153; Steenis in Steenis, Fl.Males. ser. 1.5:300. 1957. *B. rubra* L. Sp.Pl. 272. 1753; FBI 5:20; FPM 830; Mayur. 247.

Succulent twiners; twigs greenish or purplish-red. Leaves 5-10 x 3-8 cm, cordate to ovate. Flowers c. 4 mm across, white to pink, in axillary spikes. Fruits c. 7 mm across.

Commonly cultivated in kitchen gardens. Fl. & Fr.: December-April.

Two forms are commonly cultivated; greenish and purplish-red. Leaves used as greens. Tamil: Kodi pasalai.

PHYTOLACCACEAE

Fruits 4-hooked, dry; leaves tomentose	.. .. .	<i>Petiveria</i>
Fruits not 4-hooked, fleshy; leaves glabrate	.. .. .	<i>Rivina</i>

Petiveria L.

Petiveria alliacea L.Sp.Pl.342. 1753; Mayur. 251. - Plate 25 A-E.

Undershrubs, up to 80 cm tall. Leaves 5-13 x 2-4 cm, elliptic. Flowers c. 5 mm across, pale white, in terminal spike-like racemes; tepals 4; stamens 8; stigma sessile, lateral. Fruits c. 5 mm long.

A weed of waste places around Teynampet; rare. Fl. & Fr.: September-December.

Rivina L.

Rivina humilis L.Sp.Pl.121. 1753; Mayur. 251; Backer in Steenis, Fl.Males.ser. 1.4:229. 1951. - Plate 26 A-B.

Undershrubs, up to 80 cm tall. Leaves 4-14 x 1-5 cm, lanceate to ovate-lanceate. Flowers c. 3 mm across, white, in terminal and axillary racemes; tepals 4; stamens 4; style terminal. Fruits c. 3 mm across, red.

A weed of waste places; rare. Fl. & Fr.: August-January.

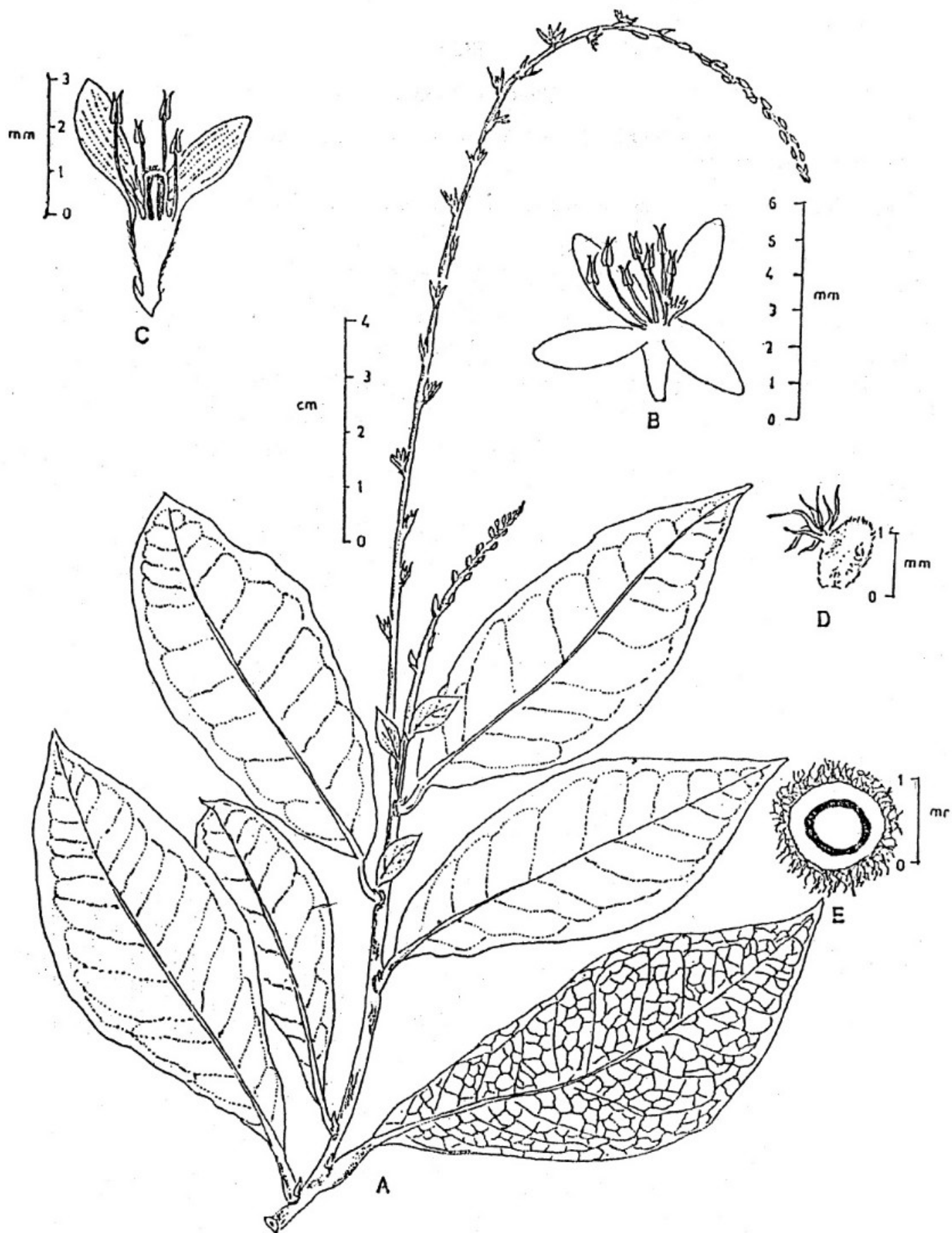


PLATE 25: *Petiveria alliacea* L. A - Twig. B - Flower.
 C - L.S. of flower. D - Gynoecium.
 E - C.S. of ovary.

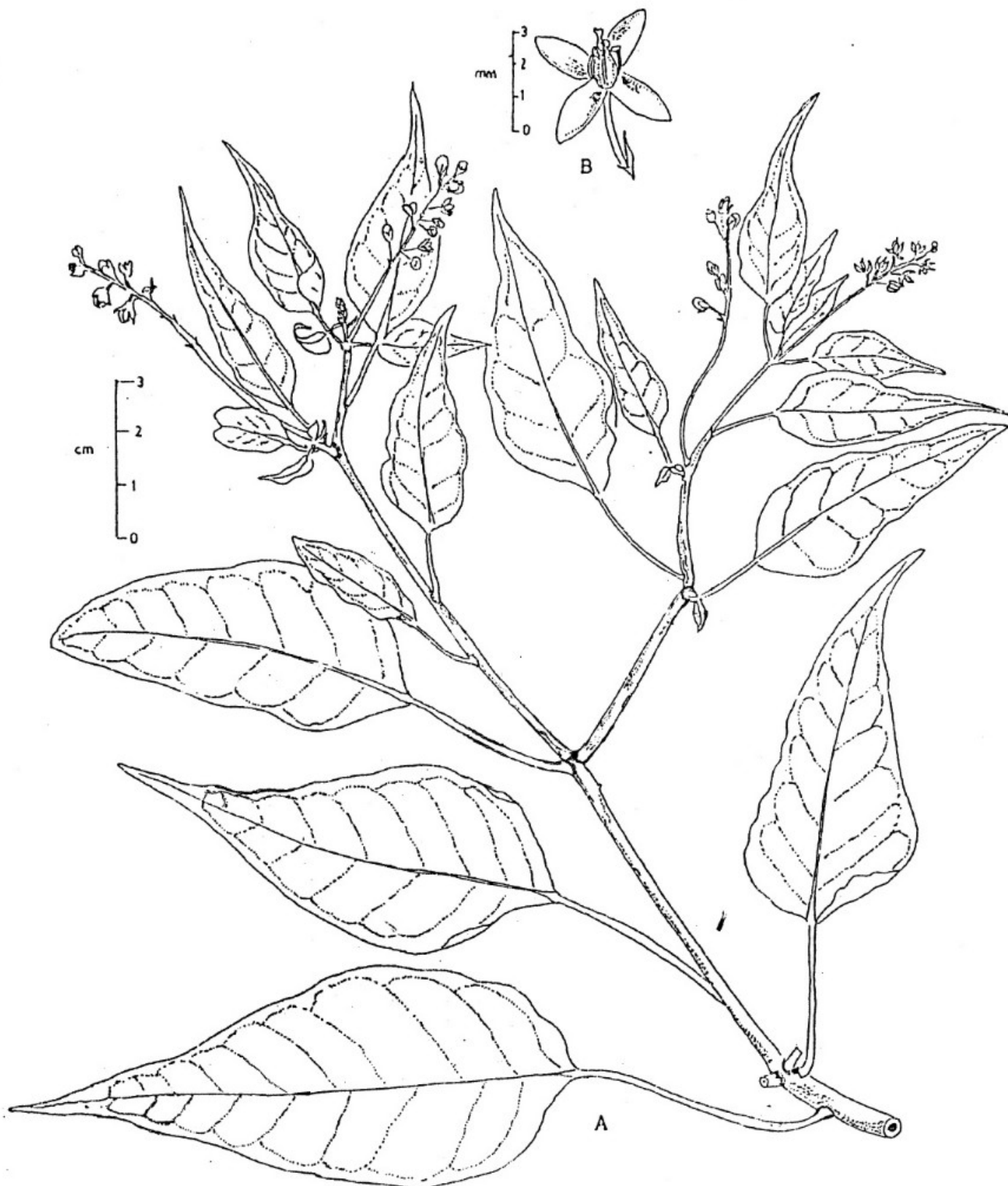


PLATE 26: Rivina humilis L. A - Twig. B - Flower.

POLYGONACEAE

- | | | |
|--|---------|----------------------|
| 1. Stems flattened and jointed | .. .. . | <i>Muehlenbeckia</i> |
| 1. Stems not flattened and not jointed: | | |
| 2. Inflorescences tendrillar | .. .. . | <i>Antigonon</i> |
| 2. Inflorescences not tendrillar: | | |
| 3. Stems prostrate; leaves under 2 cm long | .. .. . | <i>Polygonum</i> |
| 3. Stems erect; leaves over 3 cm long | .. .. . | <i>Persicaria</i> |

Antigonon Endl.

Antigonon leptopus Hook. & Arn. Bot. Beechey Voy. 308.t.69. 1841; FPM 835; Mayur. 252; BICS 265.

Climbers; stems 5-angled. Leaves 4-10 x 2-6 cm, ovate to ovate-lanceate, base cordate to subcordate, veins prominent. Flowers c. 8 mm across, white or pink, fascicled on axillary peduncles. Nutlets c. 8 x 6 mm.

Cultivated in gardens as an ornamental, also runs wild along railway tracks and hedges; common. Fl. & Fr.: throughout the year.

Two forms are commonly seen: white-flowered and pink-flowered.

Muehlenbeckia Meisner (nom.cons.)

Muehlenbeckia platyclada (F.v. Muell ex Hook.) Meisner in Bot. Zeitung (Berlin) 22:313. 1865; FPM 835. *Coccoloba platyclada* F.v.Muell. ex Hook. in Curtis, Bot.Mag.t.5382. 1863. *Homalocladium platycladium* (F.v.Muell. ex Hook.) Bailey, Gentes Herb. 2:58. 1929 & Man. Cult. Pl.351. 1958.

Herbs or undershrubs, up to 60 cm tall; stems up to 1.3 cm broad. Leaves 1-2 x 0.5-1 cm, lanceate, deciduous. Flowers c. 3 mm across, pale green, in axillary fascicles. Nutlets 3-angled.

Occasionally cultivated in gardens as an ornamental. Fl. & Fr.: January-April.

Persicaria (L.) Mill.

Persicaria glabra (Willd.) Gomez. in Ann. Inst.Segunda Ensef; Habana 2:278. 1896. *Polygonum glabrum* Willd. Sp.Pl. 2:447. 1799; FBI 5:34; FPM 832; Subram. Aquat. Angiosp. 43. f.27. 1962.

Undershrubs, up to 2 m tall. Leaves 8-15 x 1.5-3 cm, lanceate, glabrous; ochreae tubular. Flowers c. 3 mm across, pink, in terminal and axillary, spicate racemes. Nutlets c. 3 x 2.5 mm.

A semiaquatic weed of fresh-water canals and tanks; rare. Fl. & Fr.: November-April.

Polygonum L.

Polygonum plebeium R.Br. Prodr. 420. 1810; FBI 5:27; FPM 832; Mayur. 252; Steward in Contrib. Gray Herb. 5(88):24. 1930.

Prostrate herbs. Leaves 6-13 x 2-5 mm, oblong. Flowers c. 3 mm across, pinkish, axillary; tepals 5; stamens 8; styles 3. Fruits c. 3 mm long.

A weed of rice fields, dry ponds and lakes; fairly common. Fl. & Fr.: February-August.

ARISTOLOCHIACEAE**Aristolochia L.**

Prostrate or spreading herbs; flowers solitary

.. ..

A. bracteolata

Climbers; flowers in fascicles

.. ..

A. indica

Aristolochia bracteolata Lam. Encycl. 1:258. 1783. *A. bracteata* Retz. Obs. Bot. 5:29. 1788; Brown 159; FBI 5:75; FPM 841; Mayur. 252; BICS 25. - Plate 27 A-D.

Stems angled. Leaves 4-6 x 3-6 cm, broadly ovate; glaucous, base cordate. Flowers c. 5 cm long, purplish, solitary, axillary; bracteoles foliaceous; perianth inflated below, tubular in the middle and prolonged into a lip above. Capsules c. 2 x 1.6 cm.

A weed along bunds of lakes and rice fields, also along river banks; rare. Fl. & Fr.: throughout the year. Tamil: Aadu theendaappaalai.

Aristolochia indica L.Sp.Pl. 960. 1753; Brown 159; FBI 5:75; FPM 841; Mayur. 253; BICS 20.

Stems 7-ribbed. Leaves 4-7 x 1.5-4 cm ovate-oblong to oblong-lanceate, base truncate. Flowers c. 4 cm long, purplish; perianth inflated below, tubular in the middle and prolonged into a lip above. Capsules c. 2.5 x 1.8 cm, septical.

In scrub jungles and hedges; fairly common. Fl. & Fr.: October-December. Tamil: Easwara mooli.

PIPERACEAE

Climbing shrubs, rooting at nodes

.. ..

Piper

Erect herbs, not rooting at nodes

.. ..

Peperomia

Peperomia Ruiz et Pavon

Peperomia pellucida (L.) Kunth, Nov.Gen. Sp. 1:64. 1815; FPM 847; Mayur. 253; Yuncker in Ann. Missouri Bot. Gard. 37:79. 1950. *Piper pellucidum* L.Sp.Pl.30. 1753.

Herbs, up to 20 cm tall; stems transparent. Leaves 1.5-3 x 1-2.5 cm, ovate-deltoid, base cordate to subcordate. Flowers minute, naked, in dense succulent spikes; stamens 2. Fruits c. 1 mm across.

A weed of gardens; rare. Fl. & Fr.: throughout the year.

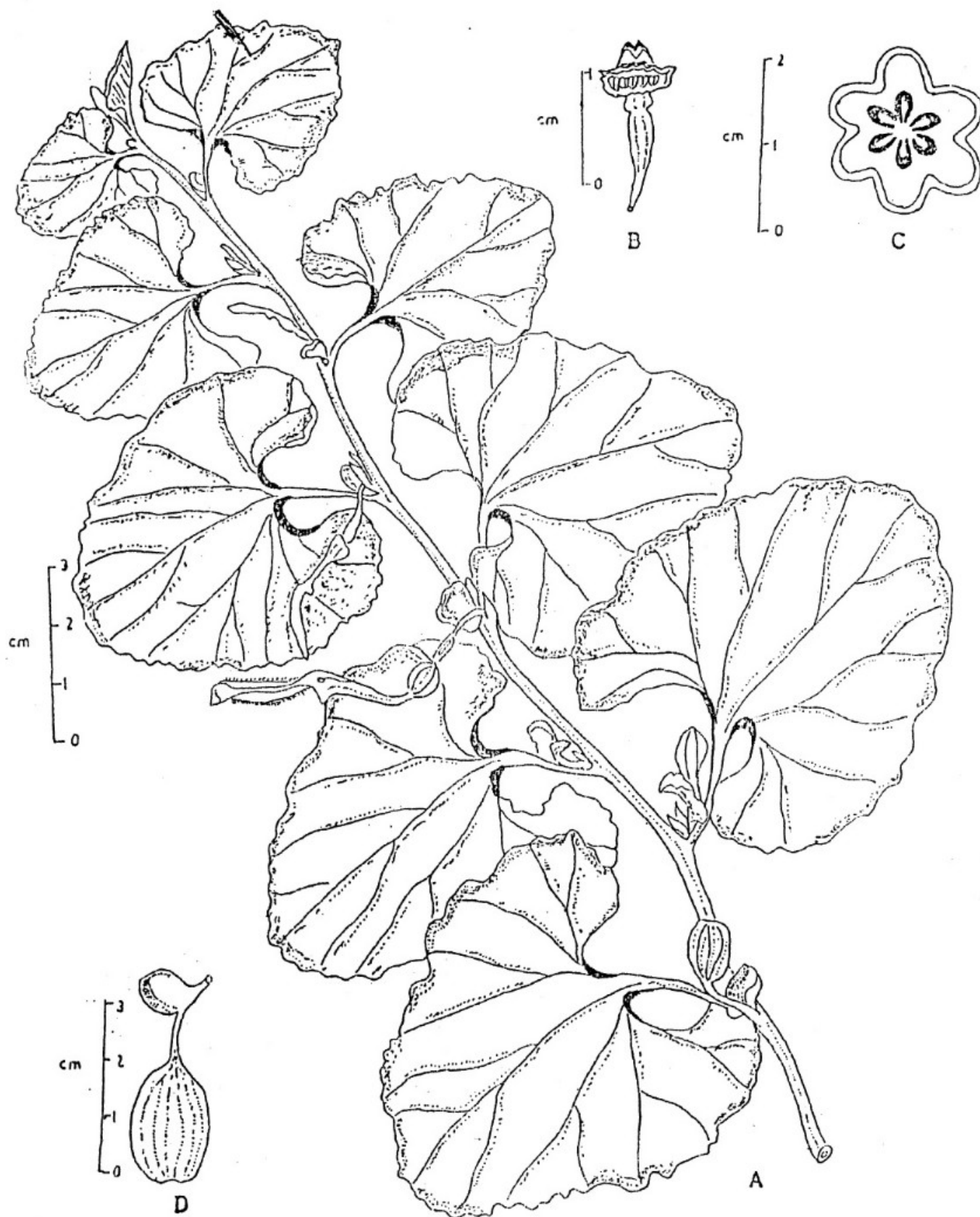


PLATE 27: *Aristolochia bracteolata* Lam. A - Twig.
 B - Androecium and gynoecium. C - C.S. of ovary.
 D - Fruit.

Piper L.

Piper betle L. Sp.Pl. 28. 1753; FBI 5:85; FPM 845; Mayur. 253.

Leaves 7-12 x 5-7 cm, ovate, glabrous, shiny, base cordate, apex acute to acuminate. Flowers minute, unisexual, in dense, succulent spikes.

Occasionally cultivated, along with *Sesbania grandiflora*. Fl.: February-March.

Leaves chewed with areca-nut and lime. Tamil: Vettilai Kodi. English: Betle vine.

LAURACEAE

Stems thread-like, leafless	.. .. .	<i>Cassytha</i>
Stems not thread-like, leafy	.. .. .	<i>Litsea</i>

Cassytha filiformis L. Sp.Pl. 35. 1753; FBI 5:188; FPM 868; Mayur. 254.

Climbers; stems green, wiry, with minute, haustorial roots. Leaves absent. Flowers c. 2 mm across, sessile, white, in small, terminal spikes; tepals 6, persistent in fruit. Fruits c. 6 mm across, enclosed in perianth.

Parasitic on several plant species.

In jungles and thickets; common. Fl. & Fr.: throughout the year.

Litsea Lam. (nom. cons.)

Litsea glutinosa (Lour.) Robinson in Philipp. J. Sci. 6:321. 1911; Kosterm. in Reinwardtia 7:505. 1969. *Sebifera glutinosa* Lour. Fl. Cochinch. 638. 1790. *Litsea chinensis* Lam. Encycl. 3:574. 1792; FPM 864; Mayur. 254.

Trees, up to 10 m tall. Leaves 12-16 x 3-6 cm, elliptic-oblong, entire, base cuneate, apex obtuse. Flowers c. 6 mm across, pale yellow, in umbels; stamens c. 20. Fruit c. 6 mm across.

In jungles around Guindy; rare. Fl.: January - February.

THYMELAEACEAE**Wikstroemia Endl. (nom. cons.)**

Wikstroemia indica (L.) Mey. in Bull. Acad. Imp. Sci. St. Petersburg 1:357. 1843 & in Ann. Sci. Nat. (Bot.) 2:20: 50. 1843; Towns. in *Dassan. & Fosb. Rev. Handb. Fl. Ceylon* 2:503. 1981. *Daphne indica* L. Sp.Pl. 357. 1753. *Wikstroemia viridiflora* Meisn. in Denkschr. Konig. - Bayer. Bot. Ges. Regensburg 3:286. 1841; FPM 872; Mayur. 255. *Wikstroemia indica* var. *viridiflora* (Meisn.) Hook.f. in Hook.f.Fl.Brit. India 5:195. 1886.

Shrubs, up to 2 m tall. Leaves 2-5 x 1-2 cm, elliptic to oblanceate, glabrous. Flowers c. 3 mm across, pale yellow, in terminal and axillary spikes. Berries c. 7 mm across, red when ripe.

In scrub jungles around Guindy, also along sandy seashores; fairly common. Fl. & Fr.: July-September. Native of Burma and Malaya.

LORANTHACEAE

Dendrophthoe Mart.

Dendrophthoe falcata (L.f.) Ettingsh. in Akad. Wiss. Wien Math.-Naturwiss. Kl. Denkschr. 32:68. t.13. ff.14 & 15. 1872. *Loranthus falcatus* L.f. Suppl. Pl. 211. 1781. *L. longiflorus* Desr. in Lam. Encycl. 3:598. 1792; FBI 5:214; FPM 877; Barnes 35.

Parasitic shrubs. Leaves 6-10 x 2-5 cm, elliptic, coriaceous. Flowers c. 4.5 cm long, yellowish-pink, in axillary racemes. Fruits c. 1.8 x 0.8 cm, oblong-ellipsoid, reddish.

In orchards, parasitic on *Mangifera indica*; rare. Fl. & Fr.: February-April.

HERNANDIACEAE

Gyrocarpus Jacq.

Gyrocarpus asiaticus Willd. Sp. Pl. 4: 982. 1806; FTN 2:213. *G. americanus* auct. non Jacq. 1763; FPM 869.

Trees, up to 12 m tall. Leaves broadly ovate, base subcordate, margin entire, apex acuminate. Flowers c. 3 mm across, in terminal panicles, on defoliate branches. Samaras with two spatulate wings.

Along hill slopes, St. Thomas Mount, also cultivated in Parks. Leaf fall: March-April. Fl. April-May. Fr.: May-July.

PROTEACEAE

Grevillea robusta A.Cunn. ex R.Br. Proteac. Nov. 24. 1830; FPM 870; Mayur. 255; FTN 2:213.

An evergreen tree, rarely cultivated in Parks. English: Silver Oak. Tamil: Savukku. Native of Australia.

SANTALACEAE

Santalum L.

Santalum album L. Sp.Pl. 349. 1753; Brown 158; FBI 5: 231; FPM 883; Mayur. 256.

Trees, up to 8 m tall. Leaves 4-8 x 1.6-4 cm, elliptic, glaucous. Flowers c. 6 mm across, purplish, in terminal and axillary cymes; perianth campanulate. Drupes c. 9 mm across.

In scrub jungles around Tambaram; rare. Fl. & Fr.: August-March.

Timber used for making toys etc., also for extracting sandalwood oil used in perfumery. Tamil: Santhanam. English: The Sandalwood Tree.

EUPHORBIACEAE

- | | |
|---|-------------------------------|
| 1. Flowers in cyathia: | |
| 2. Involucre of cyathia cup-shaped | <i>Euphorbia</i> |
| 2. Involucre of cyathia ligulate | <i>Pedilanthus</i> |
| 1. Flowers not in cyathia: | |
| 3. Stems twining; twigs with stinging hairs | <i>Tragia</i> |
| 3. Stems not twining; twigs without stinging hairs: | |
| 4. Filaments branched | <i>Ricinus</i> |
| 4. Filaments unbranched: | |
| 5. Plants with stellate hairs: | |
| 6. Trees | <i>Givotia</i> |
| 6. Herbs or undershrubs: | |
| 7. Leaves woolly | <i>Chrozophora</i> |
| 7. Leaves not woolly | <i>Croton</i> |
| 5. Plants without stellate hairs: | |
| 8. Ovules 2 in each locule: | |
| 9. Corolla present | <i>Cleistanthus</i> |
| 9. Corolla absent: | |
| 10. Trees or shrubs: | |
| 11. Plants armed | <i>Securinega</i> |
| 11. Plants unarmed: | |
| 12. Leaves under 8 mm broad | <i>Phyllanthus p.p.</i> |
| 12. Leaves over 10 mm broad: | |
| 13. Flowers in spikes or racemes | <i>Antidesma</i> |
| 13. Flowers solitary or fascicled: | |
| 14. Leaves coriaceous | <i>Drypetes</i> |
| 14. Leaves chartaceous: | |
| 15. Plants cauliflorous | <i>Phyllanthus p.p.</i> |
| 15. Plants not cauliflorous: | |
| 16. Ovary 3-locular | <i>Breynia p.p.</i> |
| 16. Ovary 5-or more-locular | <i>Phyllanthus p.p.</i> |
| 10. Herbs or undershrubs: | |
| 17. Leaves succulent | <i>Sauropus</i> |
| 17. Leaves not succulent: | |
| 18. Fruits smaller than perianth: | <i>Breynia p.p.</i> |
| 18. Fruits larger than perianth | <i>Phyllanthus p.p.</i> |
| 8. Ovules one in each locule: | |
| 19. Leaves palmately angled or lobed | <i>Jatropha</i> |
| 19. Leaves not as above: | |
| 20. Plants laticiferous: | |
| 21. Leaves variegated | <i>Codiaeum</i> |
| 21. Leaves not variegated: | |

- | | | |
|----------------------------------|---------|--------------------|
| 22. Fruits under 1.2 cm across | .. .. . | <i>Excoecaria</i> |
| 22. Fruits over 4 cm across | .. .. . | <i>Hura</i> |
| 20. Plants not laticiferous: | | |
| 23. Leaves linear-oblong: | .. .. . | <i>Sebastiania</i> |
| 23. Leaves not linear-oblong: | | |
| 24. Fruits on filiform pedicels | .. .. . | <i>Micrococca</i> |
| 24. Fruits sessile or subsessile | .. .. . | <i>Acalypha</i> |

Acalypha L.

- | | | |
|---|---------|----------------------|
| 1. Annual herbs: | | |
| 2. Fruits much smaller than subtending bracts | .. .. . | <i>A. indica</i> |
| 2. Fruits equal to or slightly larger than subtending bracts: | .. .. . | <i>A. lanceolata</i> |
| 1. Perennial shrubs | .. .. . | <i>A. wilkesiana</i> |

Acalypha indica L. Sp.Pl. 1003. 1753; Brown 162; FBI 5:416; Pax & Hoffm. in Engler, Pflanzenr. 16:33. 1924; FPM 930; Mayur. 269.

Herbs, up to 50 cm tall. Leaves 2-5.5 x 2-5 cm, ovate-rhomboid to deltoid, serrulate, base 3-veined and often cuneate. Spikes axillary, up to 6 cm long; staminate flowers c. 0.5 mm across; pistillate flowers c. 0.6 mm across. Fruits c. 3 mm across.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Leaf extract mixed with lime and applied for insect bites and stings. Tamil: Kuppai maeni.

Acalypha lanceolata Willd. Sp.Pl. 4:524. 1805; FPM 931; Mayur. 270; Airy Shaw, Euphorbiac. Borneo 24. 1975. *A. fallax* Muell.-Arg. in Linnaea 34:43. 1865; FBI 5:416.

Stems up to 40 cm tall, hirsute. Leaves 4-7 x 3-6 cm, ovate, base obtuse, margin crenate-serrate. Spikes up to 6 cm long. Flowers 0.5-1 mm across. Capsules c. 3 mm across.

A weed of waste places; rare. Fl. & Fr.: throughout the year.

Acalypha wilkesiana Muell.-Arg. in DC. Prodr. 15(2): 817. 1866; Pax & Hoffm. 153; FPM 931; Airy Shaw 24.

Shrubs, up to 5 m tall; twigs often reddish. Leaves 8-25 x 5-17 cm, ovate, base truncate to subcordate, margin serrate, apex acuminate. Flowers reddish, in erect or pendulous spikes up to 25 cm long.

Commonly cultivated in gardens as an ornamental. Fl.: throughout the year.

Antidesma L.

Antidesma ghaesembilla Gaertn. Fruct. 1:189. 1788; FBI 5:357; Pax & Hoffm. in Engler, Pflanzenr. 15:155. 1924; FPM 908; Airy Shaw, Euphorbiac. Borneo 211. 1975.

Dioecious shrubs or small trees, up to 6 m tall. Leaves 6-13 x 4-8 cm, ovate-oblong to ovate-elliptic, glabrate, base truncate to cuneate, margin undulate to entire, apex truncate-mucronate. Flowers c. 2.5 mm long, cream-coloured, in terminal and axillary branched or simple spikes. Fruits c. 5 mm across.

In scrub jungles; very rare. Fl. & Fr.: July-October.

Breynia Forst. & Forst.f. (*nom.cons.*)

Fruits smaller than subtending perianth	.. .. .	<i>B. retusa</i>
Fruits larger than subtending perianth	.. .. .	<i>B. vitis-idaea</i>

Breynia retusa (Dennst.) Alston in Ann. Roy. Bot. Gard. (Paradeniya) 11:204. 1929. *Phyllanthus retusus* Dennst. Schluss. Hort. Malab. 24. 1818. *Breynia patens* (Roxb.) Rolfe in J. Bot. 20:359. 1882; FBI 5:329; FPM 912. *Phyllanthus patens* Roxb. Fl. Ind. 3:667. 1832.

Undershrubs, up to 40 cm tall; stems 4-5-angled; branchlets up to 10 cm long. Leaves 7-18 x 5-13 mm, elliptic to obovate-elliptic or suborbicular, glaucous beneath. Flowers c. 2 mm across, in axillary fascicles or solitary. Fruits c. 4 mm across.

A weed of open places near scrub jungles; rare. Fl. & Fr.: July-December.

Breynia vitis-idaea (Burm.f.) Fischer in Bull. Misc. Inform. 1932:65. 1932. *Rhamnus vitis-idaea* Burm.f. Fl. Ind. 61. 1768. *Breynia rhamnoides* (Retz.) Muell.-Arg. in DC. Prodr. 15(2):440. 1866; FBI 5:330; FPM 912; Mayur. 265. *Phyllanthus rhamnoides* Retz. Obs. Bot. 5:30. 1788.

Shrubs, up to 3 m tall; branchlets up to 12 cm long. Leaves 1.5-2.5 x 0.8-1.8 cm, ovate-elliptic, glabrous, glaucous beneath. Flowers c. 1 mm across, greenish or pale yellow, axillary, solitary or a few together. Fruits c. 7 mm across.

In scrub jungles; fairly common. Fl. & Fr.: throughout the year.

Chrozophora Juss. (*nom.cons.*)

Chrozophora rottleri (Geiseler) Juss. Euphorb. Gen. 28. 1824; Pax & Hoffm. in Engler, Pflanzenr. 6:19. 1912; FPM 921; Mayur. 267. *Croton rottleri* Geiseler, Croton Monogr. 54. 1807.

Undershrubs, up to 30 cm tall. Leaves 2-5 x 1-4 cm, ovate, sometimes shallowly 3-lobed, undulate, base oblique, apex acute, veins deeply impressed. Flowers in terminal racemes, staminate flowers above and pistillate flowers below. Fruits c. 4 mm across.

A weed of waste places; very rare. Fl. & Fr.: December-April.

Cleistanthus Hook.f. ex Planch.

Cleistanthus collinus (Roxb.) Benth. ex Hook.f. in Hook.f. Fl. Brit. India 5:274. 1887; Jabl. in Engler, Pflanzenr. 8:51. 1915; FPM 897; Mayur. 262. *Cluytia collina* Roxb. Pl. Cor. t. 169. 1902 & Fl. Ind. 3:372. 1832.

Shrubs, up to 4 m tall. Leaves 3-6 x 2.8-5.5 cm, broadly elliptic to obovate or suborbicular, glabrous, apex obtuse or retuse to emarginate. Flowers c. 7 mm across, greenish, axillary. Fruits c. 1.8 cm across.

In scrub jungles; rare. Fl. & Fr.: July-October.

Leaves highly poisonous. Tamil: Oduvan thazhai.

Codiaeum Juss.

Codiaeum variegatum (L.) Blume, Bijdr. 606. 1825; FBI 5: 399; FPM 942; Mayur. 267.
Croton variegatus L. Sp. Pl. ed. 3. 1424. 1764.

Shrubs or trees with watery latex, up to 8 m tall. Leaves variable in size, shape and colour, 8-30 x 0.5-12 cm, linear, lanceate, elliptic or ovate-elliptic, sometimes twisted and curled. Flowers c. 4 mm across, pale white or greenish, in axillary racemes.

Commonly cultivated in gardens as an ornamental. Fl.: October-April. English: Garden Crotons.

Croton L.

Croton bonplandianum Baillon in Adansonia 4:339. 1864; Croizat in JBNHS 41:573. 1940.
C. sparsiflorus Morong. in Ann. New York Acad. Sci. 7:221. 1893; FPM 920; Mayur. 267.

Undershrubs with watery latex, up to 40 cm tall. Leaves 3-9 x 1.5-5 cm, ovate or ovate-lanceate, base sometimes glandular, margin serrulate. Flowers c. 3 mm across, in terminal racemes. Fruits c. 4 mm across.

A weed of waste places; common. Fl. & Fr.: throughout the year. Native of tropical America.

Mayuranathan (*l.c.*) reports that he noticed this plant for the first time around Madras in 1922. Since then it has spread very fast and become very common.

Drypetes Vahl

Drypetes sepiaria (Wight & Arn.) Pax & Hoffm. in Engler, Pflanzenr. 15:271. 1922. *Hemicyclia sepiaria* Wight & Arn. in Edinburgh New Philos. J.14:297. 1833; FBI 5:337; FPM 909; Mayur. 262.

Shrubs or trees, up to 6 m tall; stems prominently lenticellate. Leaves 4-8 x 2-4 cm, ovate-oblong to ovate-lanceate, coriaceous, glabrous, base truncate to cordate, margin subserrate, lateral veins obscure. Flowers c. 7 mm across, greenish, in axillary fascicles. Fruits c. 8 mm across, red when ripe.

In scrub jungles; rare. Fl. & Fr.: January-June.

Euphorbia L.

1. Plants with stipular spines:
 2. Stems sharply 3-4-angled; leaves caducous *E. antiquorum*
 2. Stems almost terete; leaves not caducous:
 3. Leaves under 7 cm long *E. milii*
 3. Leaves over 10 cm long *E. nivulia*
1. Plants without stipular spines:
 4. Leaves caducous; stems transformed into phylloclades *E. tirucalli*
 4. Leaves not caducous; stems not transformed into phylloclades:
 5. Shrubs *E. pulcherrima*
 5. Herbs:
 6. Lower leaves alternate:
 7. Rims of involucre glands circular *E. heterophylla*
 7. Rims of involucre glands oblong *E. cyathophora*
 6. Lower leaves opposite:
 8. Limbs of involucre glands fimbriate *E. cristata*
 8. Limbs of involucre glands not fimbriate (sometimes absent):
 9. Stems rooting at nodes *E. serpens*
 9. Stems not rooting at nodes:
 10. Cyathia more than 5 together:
 11. Young stems hirsute *E. hirta*
 11. Young stems glabrous to puberulous *E. hypericifolia*
 10. Cyathia solitary or less than 5 together:
 12. Involucre glands with conspicuous petaloid limbs:
 13. Petaloid limbs almost equal *E. corrigioloides*
 13. Petaloid limbs very unequal *E. rosea*
 12. Involucre glands without petaloid limbs:
 14. Fruits with appressed hairs all over *E. thymifolia*
 14. Fruits with erect hairs along angles *E. prostrata*

Euphorbia antiquorum L. Sp.Pl. 450. 1753; Brown 160; FBI 5:255; FPM 894; Mayur. 260

Shrubs or trees, up to 6 m tall; trunk up to 18 cm in diameter; young stems green, succulent, sharply 3-angled; spines up to 8 mm long. Leaves 2-5 x 1-3 mm, elliptic, caducous. Cyathia c. 7 mm across, in axillary dichasia. Fruits c. 6 mm across.

In scrub jungles, also cultivated as a hedge plant; common. Fl. & Fr.: November-February.

Euphorbia chamaesyce L.Sp. Pl.455. 1753; FTN 2:227. *E. prostrata* Aiton, Hort. Kew. ed. 1. 2:139.1789; FPM 893; Mayur. 261.

Prostrate herbs. Leaves 3-6 x 2-3 mm, oblique-oblong, 3-veined, entire, apex obtuse. Cyathia c. 2 mm across, solitary, with 4 reddish glands. Fruits c. 3 mm across.

A weed of waste places; rare. Fl. & Fr.: December-April.

Euphorbia corrigioloides Boiss. Cent. Euphorb. 11. 1860 & in DC. Prodr. 15(2):32. 1866; FBI 5:251; FPM 892; Mayur.262.

Prostrate herbs with thick rootstock; stems glabrous, pale white. Leaves 5-12 x 3-9 mm, ovate-oblong, glabrous, glaucous beneath, often with a pinkish patch above, base obtuse-oblique or subcordate-oblique, margin entire, apex obtuse to retuse, often mucronate. Cyathia c. 3 mm across; petaloid limbs pale white. Fruits c. 1 mm across, glabrous.

A weed of open places in scrub jungles; rare. Fl. & Fr.: throughout the year.

Euphorbia cristata Heyne ex Roth, Nov. Pl. Sp. 226. 1821; FBI 5:247; FPM 892; Mayur. 261.

Prostrate or erect herbs; stems pubescent. Leaves 1-2 x 0.7-1.5 cm, ovate, pubescent, base oblique, margin minutely serrulate to entire, apex obtuse. Cyathia at ends of branches; involucre c. 4 mm across. Fruits c. 2 mm across.

A weed of waste places; rare. Fl. & Fr.: throughout the year.

Euphorbia cyathophora Murr. Commentat. Soc. Regiae. Sci. Gott. 7:81. 1786; R.-Sm. in Kew Bull. 32:75. 1878. *E. heterophylla* auct. non L. 1753; FPM 894; Mayur. 259.

Herbs, up to 60 cm tall; stems hollow. Leaves 2.5-8 x 1-3.5 cm, pinnately lobed, glabrous above, glaucous beneath, base cuneate to attenuate, apex acute. Cyathia c. 4 mm across, greenish, in terminal clusters. Fruits c. 4 mm across, glabrous.

A weed of gardens and open grounds; fairly common. Fl. & Fr.: throughout the year.

Euphorbia heterophylla L. Sp. Pl. 453. 1753; R.-Sm. in Kew Bull. 26:264. 1972. *E. geniculata* Ortega, Nov. Pl. Descr. Dec. 18. 1797; FBI 5:239; FPM 1303.

Herbs, up to 30 cm tall; stems hollow. Leaves 5-10 x 2-5 cm, elliptic to obovate-elliptic or oblanceate, glaucous beneath, lateral veins 12-18 pairs, petioles often red-tinged, base cuneate to attenuate, margin undulate to subserrate, apex acute. Cyathia in terminal clusters; involucre c. 2 mm across. Fruits c. 5 mm across.

A weed of gardens and waste places; rare. Fl. & Fr.: throughout the year.

Euphorbia hirta L. Sp. Pl. 454. 1753; FPM 892; Mayur. 260. *Euphorbia pilulifera* auct. non L. 1753; Wood 278; FBI 5:250.

Prostrate or erect herbs, up to 40 cm tall; stems hispid. Leaves 2-4.3 x 0.5-2 cm, lanceate-elliptic, puberulous, glaucous beneath, base oblique, margin serrulate to subentire. Cyathia many, clustered on short, axillary peduncles. Fruits c. 1 mm across, appressed-hairy.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Euphorbia indica Lam. Encycl. 2: 423. 1786; Raju & P.N. Rao in Indian J. Bot. 2:205. 1979; FTN 2:228. *E. hypericifolia* auct. non L. 1753; FPM 892; Mayur. 261.

Prostrate or suberect herbs. Leaves 10-15 x 5-10 mm, opposite, ovate-oblong, puberulous beneath, base oblique, margin serrulate, apex retuse to mucronate. Cyathia c. 1.5 mm across, on axillary peduncles. Fruits c. 1.5 mm across, appressed-hairy.

A weed of rice fields and other moist places; rare. Fl. & Fr.: throughout the year.

Euphorbia milii Des Moul. in Bull. Hist. Nat. Soc. Linn. Bordeaux 1:27.t.1. 1826; Ursch & Leandri in Mem.Inst. Sci. Madagascar, ser. B. Biol. Veg. 5:144. 1955. *E. splendens* Bojer ex Hook. in Curtis, Bot. Mag.t.2902. 1829; FPM 894.

Undershrubs, up to 1 m tall. Leaves 3-6 x 1.2-2.5 cm, obovate, glabrous, lateral veins obscure, base attenuate, apex mucronate; spines up to 2 cm long. Cyathia c. 1 cm across, on axillary peduncles.

Commonly cultivated in rockeries. Fl.: throughout the year.

Euphorbia nivulia Buch.-Ham. in Trans. Linn. Soc. London 14:286; Brown 160; FBI 5:255; FPM 893; Mayur. 259.

Shrubs or trees, up to 5 m tall. Leaves 10-22 x 2.5-5 cm, oblanceate, succulent. Cyathia c. 1 cm across, on short, axillary peduncles. Fruits c. 8 mm across.

In scrub jungles around Vengambakkam, also cultivated in rockeries; rare. Fl. & Fr.: February-April. Tamil: Elaikkalli.

Euphorbia pulcherrima Willd. ex Klotzsch. All. Deutsche Gartn.-Zeitung 2:27. 1834; FPM 894; Mayur. 259. *Poinsettia pulcherrima* (Willd. ex Klotzsch). Graham, Edinburgh New Philos. 1836; Brown 161; BICS 171.

Shrubs, up to 3 m tall. Leaves 10-20 x 5-13 cm, elliptic to ovate-elliptic or rhomboid, margin entire, undulate or broadly dentate, apex acute to acuminate. Cyathia in terminal clusters, subtended by brightly coloured bracts; involucre c. 5 mm across.

Commonly cultivated in gardens as an ornamental, propagated vegetatively by cuttings. Fl. & Fr.: November-March.

Euphorbia rosea Retz. Obs. Bot. 4:26. 1786/87; FBI 5:251; FPM 892; Mayur. 261.

Prostrate or decumbent herbs, with thick rootstocks; stems often reddish. Leaves 5-12 x 3-7 mm, oblong or obovate-oblong, base oblique, margin serrulate, apex acute or mucronate. Cyathia axillary. Fruits c. 1.5 mm across.

A weed on sandy seashores; rare. Fl. & Fr.: December-March.

Euphorbia serpens Kunth in IIBK. Nov. Gen. Pl.2:52. 1817; Boiss. in DC. Prodr. 15(2):29. 1862; FBI 5:253; Mitra in JBNHIS 68:852. 1971; R.-Sm. in Kew Bull. 32:76. 1978. *E. microphylla* auct. non Heyne ex Roth 1821; FBI 5:252 p.p.; FPM 893 p.p.

Prostrate, glabrous herbs. Leaves 4-6 x 3-5 mm, elliptic-orbicular, base cordate, margin entire, apex retuse. Cyathia c. 1.5 mm across, with 4 reddish glands. Fruits c. 3 mm across, glabrous.

A weed of moist places near gardens, lakes and rice fields; rare. Fl. & Fr.: December-April.

Euphorbia thymifolia L.Sp. Pl. 454. 1753; Wood 279; FBI 5:252; FPM 893; Mayur.261.

Prostrate herbs with thick rootstocks. Leaves 4-8 x 2-4 mm, ovate-oblong, base oblique, margin obscurely serrulate, apex obtuse. Cyathia in axillary clusters or solitary. Fruits c. 1 mm across.

A weed of waste places; fairly common. Fl. & Fr.: January-June. Tamil: Chinnammaan Pachcharisi.

Euphorbia tirucalli L. Sp. Pl. 452. 1753; Brown 161; FBI 5:254; FPM 893; Mayur. 259; Leach in Kirkia 9 (1):69. 1973.

Shrubs, up to 6 m tall; stems terete, glabrous, green. Leaves 6-25 x 2-4 mm, oblanceate-linear, glabrous, caducous. Cyathia c. 4 mm across. Fruits c. 6 mm across.

Cultivated in rockeries or as a hedge plant, also runs wild; fairly common. Fl. & Fr.: April-June. Tamil: Thirukkalli.

Euphorbia dracunculoides Lam. Encycl. 2:428. 1788; FBI 5:262; FPM 894; Mayur. 260.

Mayuranathan records this.

Euphorbia tortilis Rottl. ex Ainslie, Mat. Ind. 2:424. 1826; Brown 161; FBI 5:256; FPM 894; Mayur. 260; Mabber. in Taxon 26:536. 197.

Mayuranathan records this, perhaps cultivated.

Excoecaria L.

Excoecaria agallocha L. Syst. Nat. ed. 10. 2:1288. 1759 & Sp. Pl. ed. 2. 1451. 1763; FBI 5:472; Pax & Hoffm. in Engler, Pflanzenr. 5:165. 1912; FPM 941; Mayur. 270; Airy Shaw, Euphorbiac. Borneo 112. 1975.

Shrubs or trees, up to 6 m tall. Leaves 6-10 x 3-5 cm, elliptic, glabrous, base cuneate, margin entire, apex acuminate. Flowers pale white, in axillary spikes. Fruits c. 7 mm across.

Along backwaters around Adayar; rare. Fl. & Fr.: March-August. Tamil: Thillai.

Givotia Griff.

Givotia rottleriformis Griff. in Calcutta J. Nat. Hist. 4:388. 1844; Brown 162; FBI 5:395; FPM 938; Mayur. 266; R.-Sm. in Kew Bull. 22:504. 1968.

Trees, up to 7 m tall. Leaves 8-15 cm across, ovate-orbicular, stellate-tomentose, white-woolly beneath, base cordate, margin broadly dentate or shallowly lobed. Flowers c. 5 mm across, in axillary cymose panicles. Drupes c. 2.2 cm across.

In scrub jungles; very rare. Fl. & Fr.: February-April.

Hura L.

Hura crepitans L. Sp. Pl. 1008. 1753; Airy Shaw, Euphorbiac. Borneo 183. 1975.

Trees, up to 12 m tall; trunk prickly. Leaves 6-12 x 4-8 cm, ovate, base subcordate, apex acuminate, veins prominent. Staminate flowers red when mature, dense, in cone-like spikes; pistillate flowers c. 2.5 cm long, solitary; ovaries c. 12-loculed. Fruits c. 6 mm across, splitting into c. 12 mericarps.

Occasionally cultivated in parks and avenues. Fl. & Fr.: November-March.

Jatropha L.

- | | | |
|---|---------|------------------------|
| 1. Petioles glandular-hairy throughout | .. .. . | <i>J. gossypifolia</i> |
| 1. Petioles glabrous or glandular hairy only at base: | | |
| 2. Leaves entire | .. .. . | <i>J. curcas</i> |
| 2. Leaves glandular-serrate | .. .. . | <i>J. tanjorensis</i> |

Jatropha curcas L. Sp.Pl. 1006. 1753; Brown 163; FBI 5:383; Pax & Hoffm. in Engler, Pflanzenr. 4:77. 1910; FPM 937; Mayur. 266; Airy Shaw, Euphorbiac. Borneo 137. 1975; Dehgan & Webster in Univ. Calif. Publ. 74:52. 1979.

Shrubs, up to 4 m tall. Leaves 8-16 x 7.5-15 cm, obscurely 5-angled or lobed, base cordate, lobes broadly triangular, apex acute to shortly acuminate. Flowers c. 5 mm across, greenish, in leaf-opposed cymes. Fruits c. 1.8 cm across.

Occasionally cultivated as a hedge plant, also runs wild. Fl.: throughout the year.

Jatropha gossypifolia L. Sp.Pl. 1006. 1753; FBI 5:383; Pax & Hoffm. 26; FPM 937; Dehgan & Webster 54.

Shrubs, up to 2.5 m tall; young twigs purplish-red. Leaves 4-9 x 6-12 cm, palmately 3-5-parted, base cordate, lobes elliptic to elliptic-obovate. Flowers c. 7 mm across, red, in terminal branched cymes. Fruits c. 1.8 cm across.

In jungles and thickets, also cultivated along hedges; common. Fl.: throughout the year.

Jatropha glandulifera Roxb. Fl. Ind. 3:688. 1832; Brown 163; FBI 5:382; Pax & Hoffm. 31; FPM 937; Mayur. 266; Dehgan & Webster 54.

Mayuranathan records this.

Micrococca Benth.

Micrococca mercurialis (L.) Benth. in Hook. Niger Fl.503. 1849; Pax & Hoffm. in Engler, Pflanzenr. 7:133. 1914; FPM 929; Mayur. 270; R.-Sm. in Kew Bull. 37:425. 1982. *Tragia mercurialis* L. Sp.Pl. ed.3.1391. 1764.

Herbs, up to 30 cm tall. Leaves 2-5 x 1-3 cm, ovate, glabrous, base obtuse, margin serrate-crenate, apex acute to shortly acuminate. Flowers c. 1 mm across, cream-coloured, in axillary racemes. Fruits c. 3 mm across.

A weed of waste places; rare. Fl. & Fr.: throughout the year.

Pedilanthus Necker ex Poit

Pedilanthus tithymaloides (L.) Poit. in Ann. Mus. Natl. Hist. Nat. 19:390. t. 19. 1812; Brown 160; FBI 5:239; FPM 942; Mayur. 262 *Euphorbia tithymaloides* L. Sp. Pl. 453. 1753.

Undershrubs or shrubs, up to 1.5 m tall. Leaves 4-8 x 2-6 cm, ovate, ovate-elliptic or lanceate-elliptic, semisucculent, sessile or subsessile. Cyathia at ends of branches; involucre c. 1.2 cm long, reddish.

Commonly cultivated in gardens as a border plant, also in rockeries. Fl.: February-June.

Different forms with dark green, light green and variegated leaves occur under cultivation.

Phyllanthus L.

- | | | |
|---|---------|---------------------------|
| 1. Trees or shrubs: | | |
| 2. Leaves over 1.5 cm broad | .. .. . | <i>P. acidus</i> |
| 2. Leaves under 1.5 cm broad: | | |
| 3. Shrubs; fruits under 0.8 cm across: | | |
| 4. Leaves oblong | .. .. . | <i>P. polyphyllus</i> |
| 4. Leaves ovate-elliptic | .. .. . | <i>P. reticulatus</i> |
| 3. Trees; fruits over 1.5 cm across | .. .. . | <i>P. emblica</i> |
| 1. Herbs: | | |
| 5. Plants prostrate or ascending; leaves linear to lanceate | .. .. . | <i>P. virgatus</i> |
| 5. Plants erect; leaves not as above: | | |
| 6. Branchlets ascending; leaves obovate: | .. .. . | <i>P. maderaspatensis</i> |
| 6. Branchlets horizontal; leaves not obovate: | | |
| 7. Tepals 5 | .. .. . | <i>P. amarus</i> |
| 7. Tepals 6 | .. .. . | <i>P. debilis</i> |

Phyllanthus acidus (L.) Skeels in U.S.D.A. Bur. Pl. Industr. Bull. 148:17. 1909; Webster in J. Arnold Arbor. 38:66. 1957; Airy Shaw, Euphorbiac. Borneo 182. 1975. *Averrhoa acida* L. Sp. Pl. 428. 1753. *Phyllanthus distichus* (L.) Muell.-Arg. in DC. Prodr. 15(2):413. 1866; FBI 5:304. *Cicca disticha* L. Mant. Pl. 124. 1767; Brown 165; FPM 942; Mayur.265.

Trees, up to 6 m tall. Leaves 3-7 x 1.5-3.5 cm, ovate, glabrate, base obtuse, margin entire, apex acute. Flowers c. 2 mm across, purplish, in dense spikes. Fruits c. 1.5 cm across, pale yellow.

Commonly cultivated around houses. Fl. & Fr.: February-June.

Fruits edible, also used for pickles. Tamil: Araenelli. English: The star Gooseberry. Native of Malay Peninsula.

Phyllanthus amarus Schum. & Thonn. in Kongl. Danske Vidensk. Selsk. Skr. 4:195. 1829; Airy Shaw 182. *P. fraternus* Webster in Contrib. Gray Herb. 176:53. 1955. *P. niruri* auct. non L. 1753; Brown 164; FBI 5:298; FPM 903; Mayur. 264.

Herbs, up to 30 cm tall; branchlets up to 6 cm long. Leaves 5-10 x 3-6 mm, oblong, glabrous, glaucous beneath. Flowers c. 0.5 mm across, greenish-white, axillary. Fruits c. 1.5 mm across.

A weed of open grounds; common. Fl. & Fr.: throughout the year.

Whole plant is ground into a paste and consumed with butter milk or goat's milk for jaundice. Tamil: Keela nelli.

Phyllanthus debilis Klein ex Willd. Sp.Pl. 4:582. 1805; FBI 5:299; FPM 903; Webster in J. Arnold Arbor. 38:307. 1957; Airy Shaw in Kew Bull. 26:92. 1971.

Herbs, up to 30 cm tall. Leaves 6-17 x 3-7 mm, obovate-elliptic, glabrous, base cuneate to truncate, margin entire, apex acute to obtuse; petiole red-tinged. Flowers c. 2 mm across, axillary, usually solitary. Fruits c. 2 mm across.

A weed of rice fields and other marshy places; fairly common. Fl. & Fr.: throughout the year.

This may easily be confused with *P. amarus* but can be distinguished by the habitat and the tepal number.

Phyllanthus emblica L. Sp. Pl. 982. 1753; FBI 5:289; Airy Shaw, Euphorbiac. Borneo 183. 1975. *Emblica officinalis* Gaertn. Fruct. 2:122. t. 108.f.2. 1790; Brown 165; FPM 906; Mayur. 265.

Branchlets up to 30 cm long, pulvinate at base. Leaves 6-18 x 2-5 mm, linear-oblong, glabrous, glaucous beneath, lateral veins obscure. Flowers c. 1.5 mm across, pale white, axillary. Fruits c. 2.5 mm across.

Occasionally cultivated around houses, also runs wild. Fl. & Fr.: July-September.

Fruits edible, often made into pickles. Tamil: Nelli. English: The Indian Gooseberry.

Phyllanthus maderaspatensis L. Sp.Pl. 982. 1753; Brown 164; FBI 5:292; FPM 902; Mayur. 264.

Herbs, up to 50 cm tall; stems slightly woody towards base. Leaves 5-14 x 3-8 mm, obovate to obovate-oblongate, glabrous, glaucous beneath, base cuneate, apex truncate-mucronate to retuse. Flowers c. 1 mm across, axillary; tepals 6, persistent. Fruits c. 2.5 mm across.

A weed of waste places; common. Fl. & Fr.: throughout the year.

Phyllanthus polyphyllus Willd. Sp.Pl. 4:586. 1805; FBI 5:290; FPM 901.

Shrubs, up to 2 m tall. Leaves 8-16 x 3-5 mm, linear-oblong, glabrous, base obtuse to subcordate, margin entire, apex obtuse or mucronate, lateral veins 6-8 pairs. Flowers c. 1.5 mm across, axillary. Fruits c. 5 mm across.

In scrub jungles; rare. Fl. & Fr.: December-June.

Phyllanthus reticulatus Poir. in Lam. Encycl. 5:298. 1804; FBI 5:288; Airy Shaw, Euphorbiac. Borneo 185. 1975. *Kirganelia reticulata* (Poir.) Baillon, Etude Euphorbiac. 613. 1874; FPM 905; Mayur. 264.

Shrubs, often straggling; stems puberulous when young; branchlets up to 7 cm long. Leaves 1-2 x 0.5-1 cm, glaucous beneath. Flowers c. 2.5 mm across, pink-tinged, in axillary fascicles. Fruits c. 5 mm across, purplish-black when ripe.

In waste places; fairly common. Fl. & Fr.: throughout the year.

Phyllanthus virgatus Forst. f. Fl. Ins. Austral. 65. 1786. *P. simplex* Retz. Obs. Bot. 5:29. 1788; FBI 5:295; FPM 902; Mayur. 264.

Leaves 5-20 x 1.5-4 mm, glabrous, glaucous beneath, apex mucronate, petioles red-tinged. Flowers axillary; staminate flowers fascicled; pistillate flowers solitary; tepals 6. Fruits c. 2.5 mm across, on reddish, filiform pedicels.

A weed of open grounds; common. Fl. & Fr.: throughout the year.

Phyllanthus rotundifolius Klein ex Willd. Sp. Pl. 4:584. 1805; FBI 5:299; FPM 903; Mayur. 264.

Mayuranathan records this.

Ricinus L.

Ricinus communis L. Sp. Pl. 1007. 1753; Brown 163; FBI 5:457; Pax & Hoffm. in Engler, Pflanzenr. 11:119. 1919; FPM 933; Mayur. 268; Pursglve, TCD 180.

Shrubs, up to 5 m tall. Leaves 7-20 cm across, palmately 7-8-partite, peltate; petiole glandular above; lobes lanceate, serrations glandular. Flowers in terminal thyrses; staminate flowers below and pistillate ones above. Fruits c. 1.5 cm across, softly echinate; seeds mottled, shiny.

A weed of waste places; fairly common. Fl. & Fr.: throughout the year.

Seeds yield castor oil. Tamil: Aamanakku. English: Castor. Native of S. Africa.

Sauropus Blume

Sauropus bacciformis (L.) Airy Shaw in Kew Bull. 35:685. 1980. *Phyllanthus bacciformis* L. Mant. Alt. 294. 1771. *Agyneia bacciformis* (L.) Juss. Euphorbiac. Gen. 24. 1824; FBI 5:285; Pax & Hoffm. in Engler, Pflanzenr. 15:213. 1922; FPM 899; Mayur. 263. *Synostemon bacciformis* (L.) Webster in Taxon 9:26. 1960; Airy Shaw in Kew Bull. 26:343. 1972.

Prostrate or suberect herbs; stems 4-angled, woody below. Leaves 7-17 x 5-12 mm, oblong-elliptic, obovate or orbicular, glaucous, veins obscure, apex obtuse-mucronate. Flowers axillary; staminate flowers fascicled; pistillate flowers solitary. Fruits c. 6 x 5 mm, urn-shaped.

A weed of drying salt marshes, ditches and other places with clayey soils; rare. Fl. & Fr.: throughout the year.

Sebastiania Spreng.

Sebastiania chamaelea (L.) Muell.-Arg. in DC. Prodr. 15(2):1175. 1866; FBI 5:475; Pax & Hoffm. in Engler, Pflanzenr. 5:116. 1912; FPM 940; Mayur. 271; Airy Shaw in Kew Bull. 26:339. 1972. *Tragia chamaelea* L. Sp. Pl. 981. 1753.

Prostrate or suberect herbs; stems woody towards base. Leaves 1.5-5 x 0.3-0.6 cm, linear, glaucous beneath, lateral veins obscure. Flowers in slender leaf-opposed spikes. Fruits c. 5 x 4 mm.

A weed of open grounds; common. Fl. & Fr.: throughout the year.

Securinega Commers. ex. Juss. (nom. cons.)

Securinega leucopyrus (Willd.) Muell.-Arg. in DC. Prodr. 15(2):451. 1866. *Fluggea leucopyrus* Willd. Sp. Pl. 4:757. 1806; Wood 279; FBI 5:328; FPM 907; Mayur. 263; Airy Shaw in Kew Bull. 26:340. 1972.

Shrubs, up to 4 m tall; branchlets ending in thorns, Leaves 8-30 x 7-25 mm, obovate, glabrous, glaucous beneath, apex obtuse to emarginate. Flowers 1-2 mm across, greenish to pale yellow, in axillary fascicles. Fruits c. 6 mm across, white when ripe.

In scrub jungles; common. Fl. & Fr.: June-October.

Tragia L.

Leaves palmately 3-lobed

.. .. . *T. plukenetii*

Leaves not lobed

.. .. . *T. involucrata*

Tragia involucrata L. Sp. Pl. 980. 1753; FBI 5:465; Pax & Hoffm. in Engler, Pflanzenr. 9:81. 1919; FPM 931; Mayur. 268.

Leaves 5-12 x 2-6 cm, ovate to ovate-elliptic, base 3-5-veined, truncate to subcordate, margin biserrate, apex acuminate. Flowers greenish, in leaf-opposed racemes; pistillate flowers solitary, towards base; staminate flowers many, towards apex. Fruits c. 9 mm across.

In thickets and waste places; fairly common. Fl. & Fr.: throughout the year.

Tragia plukenetii R.-Sm. in Kew Bull. 37:688. 1983. *T. cannabina* L.f. Suppl. Pl. 415. 1781 *nom. illeg.*; Pax & Hoffm. 84; FPM 932; Mayur. 268.

Stems red-tinged, obscurely ribbed. Leaves 3-5 x 2.5-4.5 cm, base subcordate; lobes dentate, the median largest, 2-4 x 0.7-1.5 cm, apex acute to acuminate. Flowers 2-3 mm across, in axillary racemes. Fruits c. 7 mm across.

In thickets around bunds of lakes and rice fields; rare. Fl. & Fr.: throughout the year.

URTICACEAE

Plants succulent; leaves under 1.5 cm long

.. .. . *Pilea*

Plants not succulent; leaves over 2 cm long

.. .. . *Pouzolzia*

Pilea Lindl (*nom. cons.*)

Pilea microphylla (L.) Liebm. in Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh. ser. 2. 5(2):296. 1851; FBI 5:551; FPM 965; Mayur. 275. *Parietaria microphylla* L. Syst Nat. ed. 10. 1308. 1759.

Prostrate or suberect succulent herbs. Leaves 3-12 x 2-5 mm, opposite, unequal, obovate to oblanceate or suborbicular, glabrous. Flowers minute, in axillary fascicles. Fruits minute.

Commonly cultivated in gardens as an ornamental foliage plant. Fl. & Fr.: January-July.

Pouzolzia Gaud.

Pouzolzia zeylanica (L.) Bennett in Bennett & R. Br. Pl. Jav. Rar. 67. 1838. *Parietaria zeylanica* L. Sp. Pl. 1052. 1753. *Pouzolzia indica* (L.) Gaud. in Gaud. Voy. Bonite Bot. 503. 1826; FBI 5:581; FPM 967; Mayur. 275. *Parietaria indica* L. Mant. Pl. 128. 1767.

Erect or ascending herbs, up to 70 cm tall. Leaves 1.5-3 x 0.7-1.7 cm, ovate to ovate-lanceate. Flowers 2-3 mm across, greenish, in axillary fascicles; stamens 4-5. Achenes c. 1 x 0.8 mm, conical, black.

In scrub jungles and thickets, also along bunds of lakes and rice fields; fairly common. Fl. & Fr.: October-March.

Pouzolzia auriculata Wight, Ic. tt. 1980.f.2 & 2099. f. 37. 1853; FBI 5:582; FPM 967; Mayur. 276.

Mayuranathan records this.

ULMACEAE

Holoptelea Planch.

Holoptelea integrifolia (Roxb.) Planch. in Ann. Sci. Nat. Bot. ser. 2.10:266. 1848; FPM 943. *Ulmus integrifolia* Roxb. Pl. Cor.t. 78. 1798.

Trees, up to 10 m tall. Leaves 5-15 x 3-9 cm, obovate, scaberulent, base obtuse or subcordate. Flowers c. 5 mm across, on defoliated branches. Samaras c. 2 cm across, membranous.

Cultivated in parks and avenues, also runs wild; rare. Fl. & Fr.: March-May.

MORACEAE

- | | | |
|--|---------|---------------------|
| 1. Plants armed | .. .. . | <i>Plecosperrum</i> |
| 1. Plants unarmed: | | |
| 2. Flowers in hypanthodia | .. .. . | <i>Ficus</i> |
| 2. Flowers not in hypanthodia: | | |
| 3. Flowers solitary or fascicled | .. .. . | <i>Streblus</i> |
| 3. Flowers in dense spikes: | | |
| 4. Young leaves enclosed by bud scales | .. .. . | <i>Artocarpus</i> |
| 4. Young leaves not enclosed by bud scales | .. .. . | <i>Morus</i> |

Artocarpus Forst. & Forst. f. (*nom.cons.*)

Artocarpus heterophyllus Lam. Encycl. 3:210. 1789; Corner in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:217. 1981. *A. integrifolia* auct. non. L.f. 1781; Brown 166; FBI 5:541; FPM 957; Mayur. 274.

Trees, up to 15 m tall. Leaves 5-15 x 4-12 cm, elliptic-ovate to obovate. Inflorescence solitary, axillary, on short branchlets arising from the trunk and main branches. Syncarps up to 50 x 30 cm.

Occasionally cultivated around houses. Fl.: January-March. Fr.: March-June.

The accrescent juicy perianth is edible. Seeds roasted and eaten. Tamil: Palaa. English: The Jack Tree.

Artocarpus incisus (Thunb.) L.f. Suppl. Pl. 411. 1781; Brown 166; Mayur. 274; Corner 219. *Rademachia incisa* Thunb. in Kongl. Vetensk. Acad. Handl. 37:253. 1776.

Occasionally grown for the fruit vegetable. Native of Java.

Ficus L.

1. Leaves scabrous to hispid	.. ..	<i>F. hispida</i>
1. Leaves not as above:		
2. Plants cauliflorous	.. ..	<i>F. racemosa</i>
2. Plants not cauliflorous:		
3. Leaves tomentose or woolly	.. ..	<i>F. mollis</i>
3. Leaves not as above:		
4. Leaf apices caudate	.. ..	<i>F. religiosa</i>
4. Leaf apices not caudate:		
5. Leaves palmately 5-veined at base	.. ..	<i>F. benghalensis</i>
5. Leaves not as above:		
6. Prop roots over 100 cm long	.. ..	<i>F. microcarpa</i>
6. Prop roots under 50 cm long or absent	.. ..	<i>F. amplissima</i>

Ficus amplissima Smith in Rees, Cyclop. 14:n.68. 1810; Corner in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:242. 1981. *F. tsiela* Roxb. ex Buch. -Ham. in Trans. Linn. Soc. London 15:149. 1826; Brown 169; King in Ann. Roy. Bot. Gard. (Calcutta) 1:59. tt. 73 & 74. 1887; FBI 5:515; FPM 953; Mayur. 273.

Trees, up to 15 m tall; bark greenish-grey. Leaves 5-16 x 2-8 cm, apex acute to shortly acuminate. Syconia 1-1.5 cm across, in axillary pairs, purplish when ripe.

Along roadsides and in waste places, often on walls, also frequently found strangling the palmyrah palm; fairly common. Fl. & Fr.: June-September.

Ficus benghalensis L. Sp. Pl. 1059; FPM 952; Mayur. 273; Corner 251.

Trees, often with numerous aerial (prop) roots, up to 20 m tall. Leaves 8-15 x 6-12 cm, ovate, puberulous to glabrescent, base obtuse to subcordate. Syconia 1.2-1.7 cm across, in axillary pairs, red when ripe.

In waste places and roadsides, sometimes cultivated; common. Often seen growing on buildings and on other trees, sometimes strangling palmyrah palm. Birds eat fruits and excrete seeds with their faecal matter. Some large trees along roadsides often accommodate several other species of plants (herbs, shrubs and even other trees) along lower part of their trunks. Fl. & Fr.: January-August.

Ficus hispida L.f. Suppl. Pl. 442. 1781; King 2:116.t.154 & 155. 1888; FBI 5:522; FPM 956; Mayur. 273; Corner 277.

Shrubs or trees, up to 5 m tall; young twigs fistular. Leaves 7-25 x 3-12 cm, obovate-oblong to oblong-elliptic. Syconia up to 2.5 cm across, axillary or on leafless hanging branches, pale yellow when ripe.

In waste places, particularly near railway tracks, bunds of lakes etc., common. Fl. & Fr.: throughout the year.

Ficus microcarpa L.f. Suppl. Pl. 442. 1781; Corner 258. *F. retusa* auct. non L. 1767; King 1:50. t. 61 & 62; FBI 5:511; FPM 952; Mayur. 273.

Trees, up to 12 m tall; branches mostly low and spreading with numerous prop roots. Leaves 3-8 x 1.5-5 cm, elliptic obovate. Syconia c. 1 cm across, in axillary pairs.

In jungles around Adayar; rare. Fl. & Fr.: June-August.

Ficus mollis Vahl, Symb. Bot. 1:82. 1790; Corner 249. *F. tomentosa* Roxb. ex Willd. Sp. Pl. 4:1136. 1806; King 1:22. t. 18; FBI 5:501; FPM 952; Barnes 35.

Trees, up to 8 m tall; stems often crooked. Leaves 5-12 x 3-6 cm, opposite or alternate, elliptic to obovate-elliptic, densely tomentose. Syconia c. 8 mm across, depressed globose.

In forests, often grow upon huge rocks; rare. Fl. & Fr.: March-June.

Ficus racemosa L. Sp.Pl. 922. 1753; Brown 169; Corner 266. *F. glomerata* Roxb. Pl. Cor. 2:13.f.123. 1798; King 2:173.t.218 & 219; FBI 5:535; FPM 954; Mayur. 272.

Trees, up to 15 m tall. Leaves 5-15 x 3-6 cm, elliptic-oblong or ovate-lanceate, pubescent or glabrescent, apex acute to shortly acuminate. Syconia 2-3 cm across, red when ripe.

In waste places, often around dwellings; fairly common. Fl. & Fr.: throughout the year.

Fruits edible. Tamil: Atthi.

Ficus religiosa L. Sp.Pl. 1059, 1753; Brown 168; King 1:55.t.67 A; FBI 5:513; FPM 953; Mayur. 273; Corner 236.

Trees, up to 20 m tall, without aerial roots, Leaves 7-18 x 5-13 cm, glaucous beneath, base truncate, margin sinuate, lateral veins prominent above. Syconia 1-1.5 cm across, purplish-pink when ripe.

Along roadsides and other places, often near Hindu temples, on walls and as epiphytes on other trees; common. Fl. & Fr.: February-July.

The tree is sacred to Hindus. Tamil: Arasa maram.

Ficus benjamina L. Mant. Pl. 129. 1767; Brown 169; King 1:43.t.52; FBI 5:508; FPM 956; Mayur. 273; Corner 256.

Mayuranathan records this.

Ficus tinctoria Forst. f. Prodr. Fl. Austral. 76. 1786 subsp. **parasitica** (Willd.) Corner in Gard. Bull. Singapore 17:476. 1960 & in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 276. *F. parasitica* Willd. in Mem. Acad. Roy. Sci. Hist. (Berlin) 2:102. 1798. *F. gibbosa* Blume var. *parasitica* (Willd.) King in Ann. Roy. Bot. Gard. (Calcutta) 1:6. t. 2A-B. 1887; FBI 5:497; FPM 955; Mayur. 272.

Mayuranathan records this from Mambalam (border of tank)

Morus L

Morus australis Poir. Encycl. 4:380. 1797; Nakai in J. Arnold Arbor. 8:236. 1927; Rehder in J. Arnold Arbor. 10:123. 1929. *M. indica* auct. non L. 1753; Brown 167; FBI 5:492; FPM 958; Mayur. 274.

Shrubs or trees, up to 8 m tall. Leaves 8-15 x 5-10 cm, ovate, sometimes lobed, base truncate to cordate, apex acuminate. Flowers c. 2 mm across, greenish, in short, dense, axillary spikes. Fruits purplish-red when ripe.

Occasionally cultivated in gardens. Fl. & Fr.: throughout the year.

Fruits edible. Tamil: Kambili chedi. English: The Mulberry.

Plecospermum Trec.

Plecospermum spinosum (Roxb. ex Willd.) Trec. in Ann. Sci. Nat. ser. 3.8:124. 1847; FBI 5:491; FPM 947; Mayur. 274. *Trophis spinosa* Roxb. ex Willd. Sp. Pl. 4:734. 1806.

Straggling shrubs or lianes. Leaves 3-8 x 1.5-4 cm, obovate to elliptic, glabrous. Flowers c. 5 mm across, pale white, fascicled.

In scrub jungles; very rare. Fl.: February-September.

Streblus Lour.

Streblus asper Lour. Fl. Cochinch. 615. 1790; FBI 5:489; FPM 947; Mayur. 275; Corner in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:281. 1981.

Shrubs or trees, up to 8 m tall. Leaves 3-8 x 1-5 cm, elliptic to obovate or lanceate, scabrid. Staminate flowers in axillary fascicles, white; pistillate flowers solitary, axillary, greenish. Drupes c. 7 mm across, subglobose, covered by accrescent perianth, yellowish when ripe.

Along roadsides, hedges and other waste places; rare. Fl.: November-March. Fr.: February-April.

Fruits edible. Tamil: Piraya maram.

CASUARINACEAE**Casuarina** Adans.

Casuarina litorea L. Diss. Stickman 12. 1754; FTN 2:257. *C. equisetifolia* L. Amoen. Acad. 4:143. 1759; FBI 5:598; FPM 972; Mayur. 276.

Trees, up to 20 m tall. Cladodes up to 20 x 0.07 cm, sulcate, jointed at nodes. Leaves up to 1 mm long, subulate, whorled. Flowers minute; staminate flowers in terminal catkins and pistillate in subglobose heads. Samaras aggregated into cone-like multiple fruits.

Commonly cultivated in plantations along sandy seashores and near lakes, also in parks as an ornamental and hedge plant. Fl.: December-April.

Wood used as poles, firewood etc. Branches used for decoration. Tamil: Chavukku.

CERATOPHYLLACEAE**Ceratophyllum** L.

Ceratophyllum demersum L. Sp. Pl. 992. 1753; FBI 5:639; FPM 973; Mayur. 276; Steenis in Steenis, Fl. Males. ser. 1.4:41. 1949.

Slender, monoecious, submerged herbs. Leaves whorled, dichotomously lobed; lobes up to 2 x 0.15 cm, linear, minutely and distantly serrulate. Flowers solitary, axillary. Fruits c. 5 mm long.

A weed of fresh-water ponds and lakes, also grown in aquaria; rare. Fl. & Fr.: January-April.

MONOCOTYLEDONS**HYDROCHARITACEAE**

- | | | |
|---------------------------------------|---------|---------------------|
| 1. Herbs of salt-water | .. .. . | <i>Halophila</i> |
| 1. Herbs of fresh-water: | | |
| 2. Leaves radical: | | |
| 3. Leaves linear | .. .. . | <i>Vallisneria</i> |
| 3. Leaves other than linear: | | |
| 4. Spathes winged; leaves petiolate | .. .. . | <i>Ottelia</i> |
| 4. Spathes not winged; leaves sessile | .. .. . | <i>Blyxa</i> |
| 2. Leaves cauline: | | |
| 5. Leaves alternate | .. .. . | <i>Lagarosiphon</i> |
| 5. Leaves opposite or whorled | .. .. . | <i>Hydrilla</i> |

Blyxa Noronha ex Thouars

Blyxa octandra (Roxb.) Planch. ex Thw. Enum. Pl. Zeyl. 332. 1864; FPM 978; Mayur. 280; Hartog in Steenis, Fl. Males. ser. 1.5:392. 1957; Subram. Aquat. Angiosp. 60. 1962. *Vallisneria octandra* Roxb. Pl. Cor. 2:34. t. 165. 1802.

Submerged herbs. Leaves 10-30 x 0.5-1 cm, oblanceate-elliptic, margin entire. Flowers c. 2 cm across, white, enclosed in spathes when young, emerging just above water when mature; stamens 8 in staminate flowers; stigmas 3 in pistillate flowers. Capsules 5-8 cm long, linear.

A weed of rice fields and ditches around Red Hills lake; rare. Fl. & Fr.: December-March.

Halophila Thouars

Halophila ovalis (R.Br.) Hook.f. Fl.Tasman. 2:45. 1858; FPM 1304; Hartog in Steenis, Fl. Males.ser. 1.5:408. 1957. *Caulina ovalis* R.Br. Prodr. 339. 1810. *Halophila ovata* Aschers. in Sitz. Ber.Ges.Naturf. Freunde 1868:3. 1868; FBI 5:663; Mayur. 278.

Prostrate herbs, rooting at nodes, sometimes detached and free-floating. Leaves 4-6 x 1-2 cm, elliptic-oblong, petiolate. Flowers 1 or 2, enclosed within spathes. Fruits subglobose; seeds many.

A weed of backwaters around Ennur; rare. Fl. & Fr.: January-April.

Hydrilla Rich.

Hydrilla verticillata (L.f.) Royle, Illustr. Bot. Himal. 376. 1839; FBI 5:659; FPM 977; Mayur. 279; Hartog in Steenis, Fl.Males.ser. 1.5:385. 1957. *Serpicula verticillata* L.f.Suppl. Pl.416. 1781.

Submerged herbs. Leaves 6-10 x 2-3 mm, oblong to elliptic, margin serrulate. Male spadices c. 2 x 1.5 mm, axillary, solitary; female spadices c. 5 x 1 mm, axillary, solitary. Capsules smooth.

A weed of lakes and ponds, also cultivated in aquaria; common. Fl. & Fr.: February-April.

Lagarosiphon Harv.

Lagarosiphon alternifolia (Roxb.) Druce in Rep. Bot.Exch.Fl.Brit. Isles 1916:630. 1917; FPM 977; Govindarajulu in Proc. Indian Acad. Sci. (Plant Sci.) 93(1):15. 1984. *Vallisneria alternifolia* Roxb. Pl.Cor. 2:t.165. 1802 et Fl. Ind. 3:750. 1832. *Nechamandra alternifolia* (Roxb.) Thw. Enum. Pl. Zeyl. 332. 1864; Subram. & Balakr. in BBSI 3(1):23. 1961; Subram. Aquat. Angiosp. 56.f38. 1962.

Submerged, dioecious herbs, sometimes detached and free-floating. Leaves 2-5 x 0.2-0.4 cm, linear to linear-lanceate, reticulately veined. Male spadices c. 6 x 3 mm, short-peduncled, axillary, many-flowered; female spadices c. 3 x 1.5 mm, long-peduncled, axillary, 1-flowered. Capsules c. 5 x 4 mm, ovoid; seeds pitted.

A weed of lakes and ditches, often appearing brownish; fairly common. Staminate flowers floating on water in abundance during forenoon hours. Fl. & Fr.: December-March.

Ottelia Pers.

Ottelia alismoides (L.) Pers. Syn.Pl. 1:400. 1805; FBI 5:662; FPM 978; Mayur. 279; Hartog in Steenis, Fl. Males.ser.1.5:398. 1957; Subram. Aquat. Angiosp. 61. 1962. *Stratiotes alismoides* L.Sp.Pl. 535. 1753.

Submerged herbs, rooted below. Leaves 9-15 x 4-7 cm, ovate-oblong to ovate-orbicular, margin undulate, reticulately veined; petioles up to 20 cm long, sheathing at base. Flowers c. 3 cm across, white, scapose, solitary, enclosed by green spathes. Fruits 2-4 cm long, ellipsoid.

A weed of lakes and ditches, the white flowers projecting just above water level; common. Fl. & Fr.: November-March.

Vallisneria L.

Vallisneria natans (Lour.) Hara in J. Jap. Bot. 49:136. 1974. *Physkium natans* Lour. Fl. Cochinch. 663. 1790. *Vallisneria gigantea* Graebner in Engler, Bot. Jahrb. Syst. 49:68. 1912; Hartog in Steenis, Fl. Males. ser. 1.5:388. 1957. *V. spiralis* auct. non L. 1753; Brown 176; FBI 5:660 p.p.; FPM 977; Mayur. 280; Subram. Aquat. Angiosp. 57. 1962.

Submerged, stoloniferous, dioecious herbs. Leaves 6-30 x 0.6-1 cm, 9-12-veined. Male spadices c. 5 x 4 mm, short-peduncled; flowers c. 2.5 mm across; stamens 2; female spadices c. 1.3 x 0.5 cm, long-peduncled; peduncle spirally coiled after pollination. Fruits up to 5.5 cm long, linear-filiform.

A weed of canals, ditches and lakes; fairly common. Fl. & Fr.: November-March.

ORCHIDACEAE

- | | | |
|--|---------|------------------|
| 1. Plants epiphytic, with velamen roots | .. .. . | <i>Vanda</i> |
| 1. Plants terrestrial, without velamen roots: | | |
| 2. Leaves plicate; spur shorter than tepals | .. .. . | <i>Eulophia</i> |
| 2. Leaves not plicate; spur longer than tepals | .. .. . | <i>Habenaria</i> |

Eulophia R.Br. ex Lindl. (nom.cons.)

Eulophia epidendraea (Koen.) Schltr. Orchideen 346. 1915; FPM 1003; Mayur. 281; Jayaweera in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 2:168. 1981. *Serapias epidendraea* Koen. in Retz. Obs. Bot. 6:65. 1791. *Eulophia* ('*Eulophus*') *virens* (Roxb.) R.Br. ex Lindl. Edward's Bot. Reg. 7:Sub.t.573. 1821; Brown 177; FBI 6:1. *Limodorum virens* Roxb. Pl. Cor.t. 38. 1795 & Fl. Ind. 3:467. 1832. - Plate 28 A-C.

Herbs, with subaerial pseudobulbs. Leaves 20-50 x 1-1.5 cm, radical, linear. Scapes up to 1.2 cm tall. Flowers c. 2.5 cm across, greenish. Capsules c. 5 cm long.

In scrub jungles and thickets; rare. Fl. & Fr.: December-April.

Habenaria Willd.

- | | | |
|--|---------|-----------------------|
| Leaves appressed to the ground; flowers white | .. .. . | <i>H. roxburghii</i> |
| Leaves ascending much above the ground; flowers greenish | .. .. . | <i>H. viridiflora</i> |

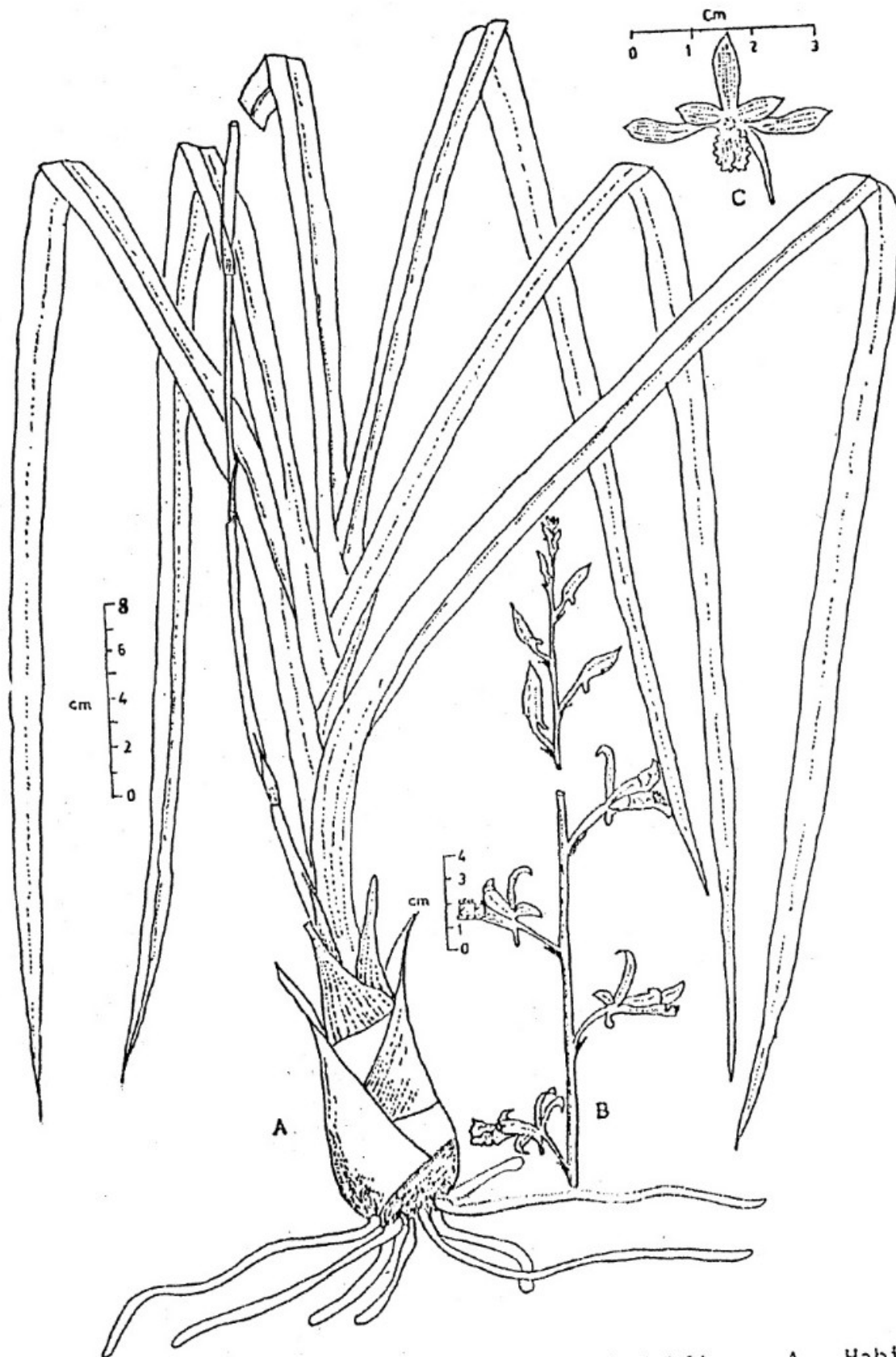


PLATE 28: *Eulophia epidendraea* (Koen.) Schltr. A - Habit.
B - Inflorescence. C - Flower.

Habenaria roxburghii(Pers.) R.Br. Prodr. 312. 1810. *Orchis roxburghii* Pers. Syn.Pl. 2:503. 1807. *Habenaria platyphylla* Spreng. Sys. Veg. ed.6.3:690. 1826; FBI 6:140; FPM 1027; Mayur. 281.

Herbs, with underground tubers. Leaves 4-6.5 x 3.5-6 cm, radical, ovate-elliptic to suborbicular, succulent. Scapes up to 40 cm tall, with lanceate bracts. Flowers c. 1.2 cm across; spur up to 3 cm long. Capsules up to 3 cm long.

In scrub jungles; rare. Fl. & Fr.: September-October.

This plant has become rare due to habitat destruction.

Habenaria viridiflora (Rottl. ex Sw.) R.Br. Prodr.312. 1810; FBI 6:150; FPM 1028; Mayur. 281; Jayaweera 361. *Orchis viridiflora* Rottl. ex Sw. in Kongl.Vetensk. Acad. Nya Handl.21:206. 1800.

Herbs, with underground tubers. Leaves 2-5 x 0.8-1 cm, linear-lanceate. Scapes up to 20 cm tall, with linear bracts. Flowers c. 1 cm across. Capsules up to 1.5 cm long.

A weed on muddy open ground near lakes, Oragadam; very rare. Fl. & Fr.: December-March.

Vanda Jones ex R.Br.

Vanda tessellata (Roxb.) Hook.ex G.Don in Loud. Hort. Brit. 372. 1830; FPM 1010; Mayur. 282; Jayaweera 218. *Epidendrum tessellatum* Roxb. Pl.Cor. 1:34. 1795. *Vanda roxburghii* R.Br. In Edward's Bot. Reg. 6:t.506. 1820; Brown 177; FBI 6:52.

Herbs. Leaves 10-20 x 1.5 - 2.5 cm, lorate, distichous, equitant, thick-coriaceous. Flowers c. 5 cm across, yellowish-brown or greyish-blue, in axillary racemes. Capsules 5-8 cm long, clavate, ribbed.

Occasionally cultivated on garden shrubs and trees, also in pots. Fl. & Fr.: February-April.

CANNACEAE

Canna L.

Canna indica L. Sp.Pl. 1. 1753; Brown 181; FBI 6:260; FPM 1045; Mayur. 282; Bailey 291.

Herbs, with underground rhizomes, up to 1.5 m tall. Leaves 20-40 x 9-20 cm, alternate, elliptic. Flowers 8-10 cm across, yellow to pink or red. Capsules c. 1.5 x 1 cm, ellipsoid-globose, muricate.

Commonly cultivated as an ornamental. Fl. & Fr.: throughout the year. Tamil: Kal vaazhai.

MUSACEAE

Musa L.

Musa paradisiaca L. Sp.Pl. 1043. 1753; Brown 181; FPM 1046; Mayur. 282; Chaesman in Kew Bull. 3:145. 1948; Bailey 286. *M. sapientum* L.Syst. Nat.ed. 10.1303. 1759; FBI 6:262.

Herbs, with underground corms, up to 4 m tall. Leaves 150-200 x 30-40 cm, sheathing below into a pseudostem. Flowers unisexual; pistillate flowers in the lower larger spathes of the compound spadix; the staminate in the axils of upper smaller spathes. Berries of varying sizes, oblong to oblong-ellipsoid; seeds usually aborted.

Cultivated in fields and around houses; common. Fl. & Fr.: throughout the year.

Fruits edible. Leaves used as substitute for plates. The inner part of inflorescences and the concealed lower part of peduncles used as vegetable. Tamil: Vaazhai. English: The Plantain.

Ravenala Adans.

Ravenala madagascariensis Gmel. Syst. 567. 1791; Mayur. 282.

Cultivated in gardens as ornamental. English : Traveller's palm. Tamil : Visiri Vaazhai.

BROMELIACEAE

Ananas Mill.

Ananas comosus (L.) Merr. Interpr. Herb. Amboin. 133. 1917; Bailey 195; Rauh, Bromel. 327. 1981. *Bromelia comosa* L. Herb. Amboin. 21. 1754. *Ananas sativus* Schult. f. Syst. Veg. 7:1283. 1830; Brown 185; FPM 1046; Mayur. 282.

Herbs, with underground rhizomes. Leaves 30-80 x 3-5 cm, radical, fibrous, margin spinous. Scapes up to 20 cm tall; flowers c. 5 mm across, red, in subcapitate spikes; ovaries sunk in peduncle, 3-locular; ovules many, axile. Syncarps up to 20 x 15 cm, with apical crown of leaves.

Occasionally cultivated around houses. Fl. & Fr.: December-March.

Fruits edible when ripe, also used for making juice, jam etc. Tamil: Annaasi. English: The Pine Apple.

AMARYLLIDACEAE

Filaments united at base into a membranous cup	.. .. .	<i>Pancratium</i>
Filaments distinct	.. .. .	<i>Crinum</i>

Crinum L.

Umbels less than 10-flowered	.. .. .	<i>C. viviparum</i>
Umbels more than 15-flowered	.. .. .	<i>C. asiaticum</i>

Crinum asiaticum L. Sp.Pl. 292. 1753; Brown 185; FBI 6:280; FPM 1051.

Herbs, with underground bulbs. Leaves 50-100 x 6-12 cm, radical, lorate-lanceate, margin entire. Scapes up to 90 cm long; flowers c. 10 cm across, white; perianth lobes linear; ovules one per locules. Fruit a capsule.

Commonly cultivated in gardens, also runs wild.

Crinum viviparum (Lam.) Ansari & Nair in J. Econ. Tax. Bot. 11:205. 1987. *Amaryllis vivipara* Lam. Encycl. 1:123. 1783. *Crinum defixum* Ker-Gawl. in J.Sci.Arts London 3:105. 1817; Brown 184; FBI 6:281; FPM 1051; Mayur. 283.

Herbs, with underground bulbs. Leaves 20-40 x 2-4 cm, lorate, margin minutely spinulose. Scapes up to 40 cm tall; flowers c. 10 cm across. white with pinkish tinge; perianth lobes linear; ovules 1-2 per locule. Capsules c. 4 x 3 cm, subglobose.

A weed of rice fields and ditches; fairly common. Fl. & Fr.: October-March. Tamil: Visha moongil.

Pancratium L.

Pancratium triflorum Roxb. Fl. Ind. 2:126. 1824; FBI 6:285; FPM 1051; Mayur. 283.

Herbs, with underground bulbs. Leaves 10-25 x 1.5-2.5 cm, radical, lorate, margin entire. Scapes up to 20 cm long. Flowers c. 9 cm across, white; coronal cup 12-toothed; ovules many, axile. Capsules ellipsoid.

On rocky slopes in scrub jungles; rare. Fl. & Fr.: June-August.

HYPOXIDACEAE

Curculigo Gaertn.

Curculigo orchioides Gaertn. Fruct. 1:63. t.16.f.11.1788; FBI 6:279; FPM 1050; Mayur. 284.

Perennial herbs; rootstocks up to 20 x 1.5 cm, with contractile roots. Leaves 10-25 x 1-2 cm, radical, linear, plicate. Scapes 2-4 cm long, axillary, underground. Flowers 1-1.8 cm across, yellow, 2-5 in a spike; ovules few. Capsules c. 1.5 x 0.5 cm, membranous; seeds striate.

In scrub jungles; common. Fl. & Fr.: July-October.

AGAVACEAE

- | | | |
|--|---------|--------------------|
| 1. Leaf apex spiny | .. .. . | <i>Agave</i> |
| 1. Leaf apex not spiny: | | |
| 2. Ovary inferior; leaves over 8 cm broad | .. .. . | <i>Furcraea</i> |
| 2. Ovary superior; leaves under 6 cm broad | .. .. . | <i>Sansevieria</i> |

Agave L.

Agave angustifolia Haw. Syn. Pl. Succ. 72. 1812; Berger, Agaven 240.1915. *A. wightii* Drumm. & Prain in Bengal Agric. 8:15. 1906; Burkill in RBSI 4:134. 1910; FPM 1052; Mayur. 295.

Perennial herbs, with underground, creeping rhizomes, Leaves 30-90 x 4-9 cm, oblong-lanceate, radical or forming a crown on short erect stems, glaucous, margin spiny. Flowers c. 6 cm long, greenish, often transformed into bulbils, in long terminal panicles.

Commonly cultivated along hedges, also runs wild. Fl.: July-December. Tamil: Katthaalai.

Furcraea Vent.

Furcraea foetida (L.) Haw. Syn. Pl. Succ. 73. 1812. *Agave foetida* L. Sp. Pl. 323. 1753. *Furcraea gigantea* Vent. in Bull. Sci. Soc. Philam. (Paris) 1:65. 1793; Brown 184; FPM 1052; Mayur. 285.

Perennial herbs, with underground, creeping rhizomes. Leaves 100-150 x 10-20 cm, lanceate-oblong, radical or forming a crown on short erect stems, bright green, margin sparsely spinous towards base. Flowers c. 8 cm long, greenish, often transformed into bulbils, in very long terminal panicles.

Cultivated in gardens and hedges, also runs wild; rare. Fl.: August-January. Tamil: Seemai katthaalai.

Sansevieria Thunb. (nom.cons.)

Sansevieria roxburghiana Schult. & Schult. f. Syst. Veg. 7:357.f.12 D & E. 1829; FBI 6:271; FPM 1061; Mayur. 287.

Herbs, with underground rhizomes. Leaves 10-50 x 1.5-3 cm, radical, lorate, channelled and transversely banded above, thick and fibrous. Scapes up to 60 cm tall, terminal; flowers c. 1.5 cm across, greenish, fascicled in the axils of bracts. Berries c. 8 mm across, orange-yellow when ripe.

In scrub jungles; common. Fl. & Fr.: July-September.

TACCACEAE**Tacca Forst.**

Tacca leontopetaloides (L.) Kuntze, Rev. Gen. Pl. 3:311. 1893. *Leontice leontopetaloides* L. Sp. Pl. 313. 1753. *Tacca pinnatifida* Forst. Cha. Genr. 70.f.35.1776; FBI 6:287; Barnes 36.

Barnes records this.

DIOSCOREACEAE**Dioscorea L.**

Leaves simple

.. .. *D. oppositifolia*

Leaves palmately compound

.. .. *D. pentaphylla*

Dioscorea oppositifolia L. Sp. Pl. 1033. 1753; Brown 175; FBI 6:292; FPM 1056; Barnes 37; Prain & Burkill in Ann. Roy. Bot. Gard. (Calcutta) 14(2):392.t.139.1938.

Dioecious, dextrorse twiners. Leaves 3-8 x 2-5 cm, opposite, subopposite or alternate, elliptic to ovate-elliptic. Flowers 2-3 mm across, pale white, in pendulous, spicate panicles. Capsules up to 2.5 cm across, strongly 3-winged.

In scrub jungles; fairly common. Fl.: September-October. Fr.: October-April.

Dioscorea pentaphylla L. Sp.P1. 1032. 1753; Brown 175; FBI 6:289; FPM 1056; Mayur, 286; Prain & Burkill 14 (1): 160. 1936; Burkill in Steenis, Fl. Males. ser. 1.4:315. 1951.

Dioecious, sinistrorse twiners, sparsely prickly, often with bulbils in leaf axils. Leaves 1-5-foliolate; leaflets 4-10 x 2-4 cm, elliptic or lanceate-elliptic. Flowers 2-3 mm across, in pendulous, spicate panicles. Capsules up to 2.5 x 1.3 cm, 3-winged.

In scrub jungles; common. Fl.: October-November. Fr.: November - April.

LILIACEAE

1. Climbers:

- | | | |
|--------------------------------------|-------|------------------|
| 2. Twigs spiny, with cladodes | .. .. | <i>Asparagus</i> |
| 2. Twigs not spiny, without cladodes | .. .. | <i>Gloriosa</i> |

1. Erect herbs:

- | | | |
|------------------------------------|-------|---------------------|
| 3. Leaves spiny along margins | .. .. | <i>Aloe</i> |
| 3. Leaves not spiny along margins: | | |
| 4. Tepals white, connate | .. .. | <i>Chlorophytum</i> |
| 4. Tepals not white, distinct: | | |
| 5. Flowers appearing before leaves | .. .. | <i>Urginea</i> |
| 5. Flowers appearing with leaves: | | |
| 6. Tepals stellately spreading | .. .. | <i>Iphigenia</i> |
| 6. Tepals not as above: | | |
| 7. Flowers over 1 cm long | .. .. | <i>Dipcadi</i> |
| 7. Flowers under 8 mm long | .. .. | <i>Scilla</i> |

Aloe L.

Aloe vera (L.) Burm. f. Fl. Ind. 83. 1768; FPM 1062; Mayur. 288. *A. perfoliata* var. *vera* L. Sp.P1. 320. 1753.

Perennial herbs; stems short, erect. Leaves 20-35 x 3-5 cm, radical, lorate, succulent, variegated. Flowers c. 2 cm long, pinkish, in long racemes; perianth oblong-lanceate.

Occasionally cultivated in gardens, also runs wild. Fl.: October-December. Tamil: Chotthu katthaalai. Native of Mediterranean region.

Asparagus L.

Asparagus racemosus Willd. Sp.P1. 2:152. 1799; Brown 187; FPM 1060; Mayur. 287; Jessop in Steenis, Fl. Males. ser. 1.9:216. 1979.

Perennial climbers with fascicled, tuberous roots; cladodes 10-20 x 1-2 mm, in axillary tufts, often falcate. Leaves scaly or spiny. Flowers c. 4 mm across, white, in panicles. Berries c. 5 mm across, red when ripe.

In scrub jungles, also cultivated in gardens; common. Fl.: July-August & October-November. Tamil: Thanneer vittaan kilangu.

Chlorophytum Ker-Gawl.

Chlorophytum tuberosum (Roxb.) Baker in J.Linn. Soc. Bot. 15:332. 1876; FBI 6:334; FPM 1066; Mayur. 288. *Anthericum tuberosum* Roxb.F1.1nd. 2:149. 1824.

Perennial herbs. Leaves 10-25 x 1-2 cm, radical, lorate. Peduncles up to 15 cm tall; flowers c. 1.5 cm across, white. Capsules 3-angled.

In scrub jungles, particularly along rocky hillocks; fairly common. Fl. & Fr.: July-September.

Gloriosa L.

Gloriosa superba L. Sp.P1. 305. 1753; Brown 186; FBI 6:358; FPM 1061; Mayur. 287; Jessop in Steenis, Fl. Males. ser. 1:9:193. 1979.

Perennial climbers with underground corms. Leaves 8-12 x 2-3 cm, lanceate-elliptic, apex cirrhose. Flowers 7-9 cm across, leaf-opposed or lateral, solitary or in corymbs; tepals reflexed at anthesis, margins sinuate; style deflexed at base. Capsules up to 6 x 1.5 cm, septicidal; seeds orange-red.

In scrub jungles, sometimes cultivated; common. Fl.: September-November. Fr.: October-March. Tamil: Kalappai kizhangu. English: The Glory Lily.

Iphigenia Kunth

Iphigenia indica (L.) A. Gray ex Kunth, Enum. P1. 4:213. 1843; FBI 6:357; FPM 1067; Mayur. 288; Jessop in Steenis, Fl. Males. ser. 1:9:198. 1979. *Melanthium indicum* L. Mant. Alt. 226. 1771.

Herbs, with underground corms, up to 15 cm tall. Leaves 8-17 x 0.4-0.6 cm, subradical, linear. Flowers c. 1.2 cm across, purplish, solitary, sometimes 2-3 together, terminal; tepals linear-lanceate; ovules many, axile. Capsules up to 1.8 x 0.8 cm, subcylindric.

A weed of open, moist areas of scrub jungles; rare. Fl. & Fr.: October-December. Tamil: Neerppanai.

Scilla L.

Scilla hyacinthina (Roth) Macbr. in Contrib. Gray Herb. 56:14. 1918; Deb & Dasgupta in BBSI 17:46. 1978 & FFI 7:14. 1981. *Ledebouria hyacinthina* Roth. Nov.P1.Sp. 195. 1821. *Scilla indica* (Wight) Baker in Saunders, Refug. Bot. 3 (Append.): 12. 1870 non Roxb. 1832; FBI 6:348; FPM 1067; Mayur. 289. *Barnardia indica* Wight, Ic.t. 2041. 1853.

Herbs, with underground bulbs. Leaves 4-10 x 0.8-1.5 cm, linear to lanceate-elliptic, often with purplish spots above. Peduncles up to 8 cm long, many-flowered; flowers c. 7 mm across, greenish-purple. Capsules c. 5 mm across, subglobose.

A weed of open grounds, also in scrub jungles; fairly common. Fl. & Fr.: July-August. Tamil: Nari vengayam.

Urginea Sternh.

Urginea indica (Roxb.) Kunth, Enum. Pl. 4:333. 1843; FBI 6:347; FPM 1066; Deb & Dasgupta in BBSI 16:118. 1974 & FFI 7:17. 1981. *Scilla indica* Roxb. Fl. Ind. 2:147. 1824. *Urginea coromandeliana* (Roxb.) Hook.f in Hook.f.Fl. Brit. India 6:347. 1892; FPM 1066; Mayur. 289. *Scilla coromandeliana* Roxb. Fl. Ind. 2:147. 1824.

Herbs, with underground bulbs. Leaves 12-20 x 1.8-3 cm, radical, lorate. Peduncles up to 90 cm tall; flowers c. 1 cm across, brownish-green. Capsules up to 2 x 0.8 cm, erect; seeds winged.

A weed of open grounds, especially near scrub jungles; fairly common. Flowers open at dusk. Fl. & Fr.: April-May.

Dipcadi Medik.

Dipcadi montanum (Dalz.) Baker var. **madrasicum** (Barnes & Fischer) Deb & Dasgupta in J. Bombay Nat. Hist. Soc. 75:59. 1978 & FFI 7:7. 1981. *D. madrasicum* Barnes & Fischer in Kew Bull. 1940:301. 1941.

Herbs. Leaves 10-30 cm long, rosulate, linear. Scapes erect, up to 60 cm long. Flowers c. 13 mm long, greenish; outer tepals longer than inner, apex recurved. Capsules c. 1.3 cm long, obovoid.

In scrub jungles, around Tambaram; rare. Fl. & Fr.: August-October.

PONTEDERIACEAE

Leaves with bulbous petioles
Leaves without bulbous petioles

.. .. *Eichhornia*
.. .. *Monochoria*

Eichhornia Kunth (nom.cons.)

Eichhornia crassipes (Mart.) Solms-Laub. in DC. Monogr. Phan. 4:527. 1883; FPM 1069; Mayur. 289; Backer in Steenis, Fl. Males. ser. 1.4:259. 1951; Subram. Aquat. Angiosp. 70. 1962; Gopal & Sharma, Water hyacinth 6. 1981. *Pontederia crassipes* Mart. Nov. Gen. Sp. Pl. 9.t.4. 1823.

Aquatic herbs, free-floating or rooted. Leaves 3-6 x 4-7 cm, rosulate, rhomboid-orbicular, with spongy, bulbous or cylindric petioles. Flowers c. 4 cm across, blue, in terminal spikes; stamens 6, unequal; filaments glandular-hairy; ovary 3-loculed; ovules many. Fruits up to 1 x 0.4 cm, ovoid.

A weed of fresh-water ponds, rivers and ditches; common. Fl. & Fr.: throughout the year.

Monochoria Presl.

Peduncles erect when young
peduncles curved when young

.. .. *M. hastata*
.. .. *M. vaginalis*

Monochoria hastata (L.) Solms-Laub. in DC. Monogr. Phan. 4:523. 1883; Backer in Steenis, Fl. Males. ser. 1.4:258. f.1. 1951; Subram. Aquat. Angiosp. 69.f.46. 1962. *Pontederia hastata* Sp. Pl. 288. 1753; Brown 189. *Monochoria hastaefolia* Presl. Rel. Haenk. 1:128. 1827; FBI 6:362; FPM 1068; Mayur. 290.

Aquatic or semiaquatic herbs, rooted in mud, up to 80 cm tall. Leaves 6-12 x 4-9 cm, solitary on top of petiole-like stems, ovate, base hastate. Flowers c. 2.5 cm across, pale blue, umbellate, 20-40 together. Fruits up to 9 x 7 mm.

A weed of fresh-water ponds and ditches; rare. Fl. & Fr.: December-April.

Monochoria vaginalis (Burm.f.) Relig. Haenk 1: 128. 1827; FBI 6:363; FPM 1068; Mayur. 290; Backer 256; Subram. 69. f.47. *Pontederia vaginalis* Burm.f. Fl. Ind. 80. 1768; Brown 189.

Aquatic or semiaquatic herbs, rooted in mud, up to 40 cm tall. Leaves 3-7 x 2-5 cm, solitary on top of petiole-like stems, ovate, base subcordate. Flowers c. 2 cm across, blue, in racemes, 6-10 together. Fruits up to 1 x 0.4 cm, oblong.

A weed of rice fields, ponds and ditches; common. Fl. & Fr.: November-April.

XYRIDACEAE

Xyris L.

Xyris pauciflora Willd. Phytographia 2. t.1.f.1. 1794; FBI 6:365; FPM 1070; Mayur. 291; Royen in Steenis, Fl. Males. ser. 1.4:371. 1953.

Herbs, up to 15 cm tall. Leaves 2-5 x 0.1-0.2 cm, radical, linear, margins minutely serrulate. Flowers c. 2.5 mm across, yellow, in terminal capitate spikes on unbranched peduncles; bracts glume-like, elliptic to orbicular, Capsules c. 2 mm long.

A weed of marshy and moist places; rare. Fl. & Fr.: December-March.

COMMELINACEAE

- | | | |
|--|---------|------------------|
| 1. Leaves variegated above | .. .. . | <i>Zebrina</i> |
| 1. Leaves not variegated above: | | |
| 2. Fertile stamens 6: | | |
| 3. Inflorescences enclosed in leaf sheaths | .. .. . | <i>Tonningia</i> |
| 3. Inflorescences not enclosed in leaf sheaths | .. .. . | <i>Cyanotis</i> |
| 2. Fertile stamens 2-3: | | |
| 4. Cymes enclosed in spathes | .. .. . | <i>Commelina</i> |
| 4. Cymes not as above | .. .. . | <i>Murdannia</i> |

Commelina L.

- | | | |
|---|---------|------------------------|
| 1. Spathes ovate-lanceate to lanceate: | | |
| 2. Capsules 2-locular; leaves linear-lanceate | .. .. . | <i>C. attenuata</i> |
| 2. Capsules 3-locular; leaves ovate-lanceate to elliptic-lanceate | .. .. . | <i>C. diffusa</i> |
| 1. Spathes not as above: | | |
| 3. Leaves ovate to ovate-oblong | .. .. . | <i>C. benghalensis</i> |
| 3. Leaves linear-lanceate | .. .. . | <i>C. ensifolia</i> |

Commelina attenuata Koen. ex Vahl, Enum. Pl. 2:168. 1806; FBI 6:372; FPM 1074; Mayur. 292.

Prostrate or erect herbs. Leaves 2.5-3 x 0.5-0.6 cm, channelled above. Spathes 1.4-2 x 0.5-1 cm; peduncle c. 1 cm long; flowers c. 5 mm across, blue; staminodes 3, cruciform, yellow; ovules 5. Capsules c. 4 x 3 mm; seeds 4, appendaged.

A weed of open grounds in scrub jungles; rare. Fl. & Fr.: November-February.

Commelina benghalensis L. Sp.Pl. 41. 1753; Brown 189; FBI 6:370; FPM 1075; Mayur. 293.

Prostrate or decumbent herbs, rooting at lower nodes. Leaves 2-5 x 2-3 cm, base nearly truncate. Spathes 1-1.3 x 1.2-1.8 cm, funnelform, pubescent; peduncle c. 5 mm long; anterior cymes 2-flowered; posterior cymes 1-flowered; flowers c. 1 cm across, pale blue; staminodes 3, cruciform; ovules 5. Capsules c. 7 x 3.5 mm; seeds 5, black.

A weed of waste places and fallow fields; common. Subterranean cleistogamous flowers often seen. Fl. & Fr.: throughout the year. Tamil: Kaana vaazhai.

Commelina diffusa Burm.f. Fl. Ind. 18.t.7. f.2. 1768; Rao in Notes Roy.Bot.Gard. (Edinburgh) 25:179. 1964. *C. nudiflora* auct. non L. 1753; FBI 6:369; FPM 1074; Mayur. 293.

Prostrate herbs, rooting at nodes. Leaves 3-8 x 1-2 cm, base subcordate. Spathes 1.5-2 x 1-1.5 cm, glabrate; peduncle c. 1.5 cm long; flowers c. 1 cm across, blue; staminodes 3, cruciform; ovules 5. Capsules c. 6 x 2 mm; seeds 5, brown.

A weed of rice fields, gutters and other moist places; common. Fl. & Fr.: throughout the year.

Commelina ensifolia R.Br. Prodr. 269. 1810; FBI 6:374; FPM 1074; Rao in Blumea 14:352. 1966. *C. undulata* R.Br. var. *setosa* Clarke in DC. Monogr. Phan. 3:179. 1881; FBI 6:373; FPM 1075; Barnes 39; Rao in Notes Roy. Bot. Gard. (Edinburgh) 26:352. 1965. *C. paleata* auct. non Hassk. 1855; Mayur. 292.

Erect or decumbent herbs. Leaves 5-9 x 0.8-1.2 cm. Spathes c. 1.5 x 2 cm, cucullate-ovate, pubescent; peduncles c. 5 mm long; flowers c. 1.5 cm across, blue; staminodes 3, cruciform; ovary 3-loculed; ovules 1 per locule. Capsules c. 6 x 5 mm; seeds 3, black.

A weed of roadsides and waste places; common. Fl. & Fr.: throughout the year.

Commelina subulata Roth, Nov. Pl. Sp. 23. 1821; FBI 6:369; FPM 1074; Mayur. 293.

Mayuranathan records this from Ennur (sandy places).

***Cyanotis* D.Don (nom.cons.)**

- | | | |
|--|---------|------------------------|
| 1. Roots tuberous | .. .. . | <i>C. tuberosa</i> |
| 1. Roots not tuberous: | | |
| 2. Bracts as long as or shorter than cymes | .. .. . | <i>C. papilionacea</i> |
| 2. Bracts much longer than cymes | .. .. . | <i>C. cristata</i> |

Cyanotis papilionacea (L.) Schult. & Schult.f. Syst. Veg. 7: 1151. 1830; FPM 1081; Barnes 39; FTN 3: 47. *Tradescantia papilionacea* L. Mant. Alt. 513. 1771.

Diffuse herbs; branches up to 25 cm long, rooting at lower nodes. Leaves 2-6 x 0.3-0.6 cm, linear, sparsely hirsute. Flowers c. 5 mm across, purplish-blue, in terminal cymes; bracts falcate; filaments bearded. Capsules subglobose, pubescent at apex.

A weed of moist places in scrub jungles; rare. Fl. & Fr.: November-March.

Cyanotis cristata (L.) D. Don. Prodr. Fl. Nepal. 46. 1825; FBI 6:385; FPM 1081; Mayur. 292. *Commelina cristata* L. Sp. Pl. 42. 1753.

Erect or decumbent herbs. Leaves 3-7 x 1-1.5 cm, elliptic-lanceate. Bracts 3-6 x 1-1.5 cm, elliptic-lanceate; bracteoles 3 pairs, each c. 15 x 5 mm, falcate. Flowers c. 6 mm across, pinkish-blue; filaments bearded. Capsules c. 3 x 2 mm; seeds 6.

A weed of waste places and in scrub jungles; rare. Fl. & Fr.: November-March.

Cyanotis tuberosa (Roxb.) Schult. & Schult. f. Syst. Veg. 7:1153. 1830; FBI 6:386; FPM 1081; Barnes 38. *Tradescantia tuberosa* Roxb. Pl. Cor. t. 108. 1799.

Prostrate herbs, rooting at nodes. Leaves hirsute beneath; radical leaves up to 30 x 1.5 cm; cauline ones much smaller, linear to lanceate. Cymes up to 1.75 cm long; peduncle up to 2.5 cm long; bracts up to 1.5 x 0.5 cm, ovate; bracteoles up to 10 pairs, falcate. Flowers c. 5 mm across, pinkish-blue.

A weed of open grounds and in scrub jungles; rare. Fl. & Fr.: throughout the year.

Cyanotis fasciculata (Roth) Schult. & Schult.f. Syst. Veg. 7:1152. 1830; FBI 6:387; FPM 1082; Mayur. 291. *Tradescantia fasciculata* Roth, Nov. Pl. Sp. 189. 1821.

Mayuranathan records this from "the foot of the Vandalur Hills".

Murdannia Royle (*nom. cons.*)

- | | | |
|---|---------|---------------------|
| 1. Petals with purplish veins | .. .. . | <i>M. spirata</i> |
| 1. Petals without purplish veins: | | |
| 2. Capsules much longer than sepals | .. .. . | <i>M. nudiflora</i> |
| 2. Capsules as long as or shorter than sepals | .. .. . | <i>M. vaginata</i> |

Murdannia nudiflora (L.) Brenan in Kew Bull. 7:189. 1952. *Commelina nudiflora* L. Sp. Pl. 41. 1753 p.p. *Aneilema nudiflorum* (L.) R. Br. Prodr. 271. 1810; FBI 6:378; FPM 1078; Mayur. 294.

Erect or decumbent herbs, rooting at lower nodes. Leaves 2-6 x 0.3-0.5 cm, lanceate. Flowers c. 1 cm across, purplish-pink, in terminal panicles; filamental hairs half the length of filaments. Capsules c. 4 x 3 mm; seeds 6.

A weed of rice fields and other moist places; fairly common. Fl. & Fr.: November-April.

Murdannia spirata (L.) Brueck. in Engler & Prantl, Pflanzenf. ed. 2. 15A:173. 1930. *Commelina spirata* L. Mant. Alt. 176. 1771. *Aneilema spiratum* (L.) R. Br. Prodr. 271. 1810; FBI 6:377; FPM 1078; Mayur. 294.

Erect or decumbent herbs, rooting at lower nodes. Leaves 1.5-3 x 0.3 - 0.5 cm, lanceate. Flowers c. 7 mm across, rosy-pink, in terminal panicles; filamental hairs less than half the length of filaments; ovules 2 per locule. Capsules c. 3 mm long, as long as calyx; seeds brownish.

A weed of rice fields and moist places; fairly common. Fl. & Fr.: November-April.

Murdannia vaginata (L.) Brueck. in Engler & Prantl. Pflanzenf. ed. 2. 15A:173. 1930. *Commelina vaginata* L. Mant. Alt. 177. 1771. *Aneilema vaginatum* (L.) R.Br. Prodr. 271. 1810; FBI 6:381; FPM 1079; Mayur. 293.

Erect or decumbent herbs, rooting at lower nodes. Leaves 3-7 x 0.4-0.6 cm, linear. Flowers c. 7 mm across, rosy-purple, in axillary and terminal panicles; filamental hairs longer than filaments; ovule 1 per locule. Capsules c. 3 x 2.5 mm; seeds brownish.

A weed of rice fields and moist places; fairly common. Fl. & Fr.: December-April.

Tonningia Neck. ex Juss.

Tonningia axillaris (L.) Kuntze, Rev.Gen.Pl.2:721.1891; FTN 3:50. *Commelina axillaris* L.Sp.Pl. 42. 1753. *Cyanotis axillaris* (L.) D. Don, Prodr. Fl. Nepal. 46. 1825; FBI 6:388; FPM 1082; Mayur. 291.

Prostrate or decumbent herbs. Leaves 4-8 x 0.5-0.8 cm, linear, margin ciliate. Flowers c. 1 cm across, pale pink or pale blue; filaments bearded; ovary 3-locular; ovules 2 per locule. Capsules c. 6 mm long.

A weed of rice fields and other moist places; common. Fl. & Fr.: throughout the year.

Zebrina Schnitzl.

Zebrina pendula Schnitzl. Bot. Zeitung. Berlin 7:870. 1849; Brueckn. in Engler & Prantl, Pflanzenf. ed. 2. 15A: 168. 1930; Bailey 198.

Prostrate herbs, rooting at nodes. Leaves 3-6 x 2-3 cm, elliptic-lanceate, greenish and hirsute above with longitudinal silvery marginal bands, purplish-pink and glabrous beneath. Spathes c. 2 x 0.8 cm, lanceate; peduncles up to 7 cm long; flowers c. 1 cm across, rosy-purple; filaments bearded; ovules 2 per locule.

Commonly cultivated in gardens, often on hanging pots. Fl.: throughout the year.

ARECACEAE

(PALMAE)

- | | | |
|---|-------|------------------|
| 1. Leaves palmately lobed: | | |
| 2. Inflorescence terminal; plants monocarpic | .. .. | <i>Corypha</i> |
| 2. Inflorescence axillary; plants polycarpic: | | |
| 3. Trunk over 25 cm across | .. .. | <i>Borassus</i> |
| 3. Trunk under 20 cm across | .. .. | <i>Livistona</i> |

- | | | |
|---|---------|------------------|
| 1. Leaves pinnately compound. | | |
| 4. Stems scandent; leaf margins spinulose | .. .. . | <i>Calamus</i> |
| 4. Stems erect; leaf margins not spinulose: | | |
| 5. Leaflets spine-tipped | .. .. . | <i>Phoenix</i> |
| 5. Leaflets not spine-tipped: | | |
| 6. Leaves unipinnate: | | |
| 7. Fruits over 12 cm across | .. .. . | <i>Cocos</i> |
| 7. Fruits under 6 cm across: | | |
| 8. Trunk over 25 cm across at base | .. .. . | <i>Roystonea</i> |
| 8. Trunk under 20 cm across at base | .. .. . | <i>Areca</i> |
| 6. Leaves bipinnate | .. .. . | <i>Caryota</i> |

Areca L.

Areca catechu L.Sp.Pl. 1189. 1753; Brown 190; FBI 6:405; Blatter, Palms Brit. Ind. 471. 1926; FPM 1085; Mayur. 386; Whitm. Palms Malaya 34. 1979.

Monoecious trees, up to 15 m tall. Leaves 0.5-2m long; leaflets 30-60 x 3-5 cm, linear. Spadices branched, each branch with a solitary, pistillate flower at base and many staminate flowers above. Fruits upto 5 x 4 cm.

Occasionally cultivated around houses. Fl. & Fr.: August-March.

Endosperm (areca-nut) chewed with betel leaves and lime. Tamil: Paakku maram. English: The Areca-nut, Betel-Nut.

Borassus L.

Borassus flabellifer L.Sp.Pl. 1187. 1753; Brown 191; FBI 6:482; Blatter, Palms Brit. Ind. 174. 1926; FPM 1090; Mayur. 295; Whitm. Palms Malaya 41. 1979.

Dioecious trees, up to 18 m tall; trunk black. Blades c. 1 m across. Male spadices with densely imbricating bracts and numerous staminate flowers; female spadices with a few, scattered pistillate flowers. Drupes 8-12 cm across.

In waste places; common. Fl. & Fr.: December-June.

Juice obtained from inflorescence is a sweet drink. It is also made into toddy and jaggery. Endosperm of tender fruits edible and cooling ('nongu'). Tender leaves dried and woven into baskets, toys etc. Older leaves used in thatching. Tamil: Panai. English: Palmyrah.

Calamus L.

Calamus rotang L.Sp.Pl. 325. 1753; Brown 191; FBI 6:447; Becc. in Ann. Roy.Bot. Gard. (Calcutta) 11:t.97. 1908; Blatter, Palms Brit. Ind. 310. 1926; FPM 1094; Mayur. 294.

Scandent shrubs. Leaves up to 90 cm long; rachis sheathing below, prickly; leaflets 15-25 x 1-2 cm, linear-ensiform. Spadices axillary; male spadices with dense flowers and female spadices with lax flowers. Fruits globose.

Along bunds of lakes and thickets near seashore; rare. Fl.: November-January.

Stems (canes) used for making furniture, baskets etc. Tamil: Perambu. English: The Cane.

Caryota L.

Caryota urens L.Sp.Pl. 1189. 1753; FBI 6:442; Brown 191; Blatter; Palms Brit. Ind. 339. 1926; FPM 1089; Mayur. 297.

Monoecious trees, up to 12 m tall. Leaves 2-4 x 1-3 m; leaflets 8-15 x 5-12 cm, broadly cuneate. Spadices 2-4 m long, axillary, pendulous, branched; flowers tristichous. Fruits c. 2 cm long.

Occasionally cultivated in parks as an ornamental. Fl. & Fr.: August-April. English: Fish tail palm, Toddy Palm. Tamil: Koonthal panai.

Cocos L.

Cocos nucifera L.Sp.Pl. 1188. 1753; Brown 193; FBI 6:482; Blatter, Palms Brit.Ind. 499. 1926; FPM 1086; Mayur. 296; Whitm. Palms Malaya 48. 1979.

Monoecious trees, up to 18 m tall. Leaves 3-6 m long; leaflets 70-90 x 3-5 cm, linear. Spadices axillary, branched; each branch with a basal pistillate flower and numerous upper staminate flowers. Drupes 15-20 cm across.

Commonly cultivated around houses. Fl. & Fr.: throughout the year.

Endosperm edible, used in culinary preparations and also in extracting coconut oil. Coconut water of tender fruits is a sweet drink, also very cooling. Leaves used in thatching. Fibre of mesocarp used in coir industries. Midribs of leaflets made into brooms. Tamil: Thennai. English: The coconut.

Corypha L.

Corypha umbraculifera L.Sp.Pl. 1187. 1753; Brown 192; FBI 6:428; Blatter; Palms Brit. Ind. 72. 1926; FPM 1089; Whitm. Palms Malaya 52. 1979.

Trees, up to 20 m tall. Petioles c. 2 m long, spinous; blades c. 1.7 m across, flabellate-multifid. Panicles 4-6 x 3-5 m, terminal. Flowers c. 6 mm across, white, bisexual. Drupes c. 2.5 cm across.

Occasionally cultivated around houses, also runs wild. Fl. & Fr.: September-April. Tamil: Thaazhi Panai. English: Talipot palm.

Livistona R.Br.

Livistona chinensis (Jacq.) R.Br.Fl.Nov. Holl. 268. 1830; Blatter, Palms Brit. Ind.104. 1920; Mayur. 297. *Catania chinensis* Jacq. Frag. Bot.16.t.2.f.1. 1800.

Trees, up to 8 m tall. Petioles 50-80 cm long; blades 70-90 cm across, flabellate-multifid. Spadices c. 70 cm long, branched, axillary; flowers c. 8 mm across. Fruits c. 1.7 cm across.

Occasionally cultivated in gardens as an ornamental. Fl. & Fr.: throughout the year.

Phoenix L.

- | | | |
|--|---------|----------------------|
| 1. Stems over 3 m tall | .. .. . | <i>P. sylvestris</i> |
| 1. Stems under 2 m tall: | | |
| 2. Fruiting peduncles over 75 cm long | .. .. . | <i>P. loureirii</i> |
| 2. Fruiting peduncles under 50 cm long | .. .. . | <i>P. pusilla</i> |

Phoenix loureirii Kunth, Enum. Pl. 3:257. 1841; FTN 3:53. *P. humilis* Royle var. *pedunculata* Becc. Malesia 3:379 & 387.t.44. ff. 13-15, 18-21 & 25-27. 1890; Mayur. 295; FPM 1088.

Small trees, up to 2.5 m tall; stems clothed with persistent leaf bases. Leaves 1-1.2 m long, with long spines near base; leaflets 20-30 x 1-1.5 cm, linear-ensiform, rigid. Female spadices up to 90 cm long; flowers 6-8 mm across. Drupes c. 1.2 x 1 cm, yellow when ripe.

In scrub jungles; very rare. Fl.: August-December. Fr.: September-February.

Fruits eaten by children. Leaves split and made into mats, brooms etc. Tamil: Malai eecham.

Phoenix pusilla Gaertn. Fruct. 1:24. 1788; Blatter 16. *P. farinifera* Roxb. Pl. Cor. t.74. 1796; Brown 192; FBI 6:426; FPM 1088; Barnes 40.

Stems up to 50 cm tall, densely clothed with persistent leaf bases. Leaves 0.7-1 m long, with long spines near base; leaflets 15-25 x 1-1.5 cm, linear-ensiform, rigid. Spadices up to 30 cm long; flowers c. 4 mm across. Drupes c. 1 x 0.8 cm, black when ripe.

In scrub jungles; common. Fl.: November-January. Fr.: December-April.

Fruits eaten by children. Leaves split and woven into mats, baskets, brooms etc. Tamil: Siru eecham.

Phoenix sylvestris (L.) Roxb. Fl. Ind. 3:787. 1832; Brown 193; FBI 6:425; Blatter 3; FPM 1088; Mayur. 295. *Elate sylvestris* L. Sp. Pl. 1189. 1753.

Trees, up to 10 m tall; stems clothed with persistent leaf bases. Leaves 1.5-2 m long, with long spines near base; leaflets 20-30 x 1-2 cm, linear-ensiform, rigid. Female spadices up to 60 cm long. Drupes c. 1.5 cm across.

In waste places near roadsides, rice fields etc.; common. Fl.: October-January. Fr.: November-April.

Leaflets split and woven into mats, brooms, baskets etc. Toddy is obtained from the inflorescence. Tamil: Eacham.

Roystonea O.F. Cook

Roystonea regia (Kunth) O.F. Cook in Sci. ser.2. 12:479. 1900. *Oreodoxa regia* Kunth, Nov. Gen. Sp. 1:305. 1815; Blatter, Palms Brit. Ind. 396. 1926; Mayur. 296.

Trees, up to 12 m tall. Leaves 2-4 m long, with prominent sheathing bases; leaflets 50-80 x 3-6 cm, linear. Spadices axillary. Flowers c. 8 mm across, pale white. Fruits c. 3 x 2.5 cm.

Commonly cultivated in parks and gardens as an ornamental. Fl. & Fr.: throughout the year.

PANDANACEAE

Pandanus Park.

Pandanus odoratissimus L.f. Suppl.Pl. 64. 1781; Brown 194; St.John in Taxon 12:201. 1963; Stone in Dassan. & Fosb. Rev.Handb.Fl.Ceylon 3:311. 1981. *P. fascicularis* Lam. Encycl. 1:372. 1783; FBI 6:485. *P. tectorius* auct. non Park. 1773; FPM 1095; Mayur. 297.

Dioecious shrubs, up to 4 m tall; stems with stilt roots. Leaves 70-120 x 4-7 cm, linear-ensiform, spiny. Spadices axillary, pendulous; spathes pale yellow; flowers minute, densely packed. Syncarps 15-20 x 10-12 cm.

Along sandy seashores; fairly common. Fl.: November-January.

Spathes sweet-scented and used by women to adorn hair. Tamil: Thaazhampoo.

TYPHACEAE

Typha L.

Typha angustata Bory & Chaub. Exp. Sci. Moree Bot. 1:338. 1833; Brown 195; FBI 6: 489; FPM 1096; Mayur. 298.

Perennial herbs with underground rhizomes. Leaves 100-300 x 1-3 cm, semiterete near base and linear above. Spikes cylindric, the upper of staminate flowers and lower pistillate, both separated by considerable distance; perianth absent; ovary stipitate.

A weed of fresh-water ponds and rice fields; rare.Fl. & Fr.: December-April.

ARACEAE

- | | | |
|---|---------|-----------------------|
| 1. Leaves sessile | .. .. . | <i>Pistia</i> |
| 1. Leaves petiolate: | | |
| 2. Inflorescences appearing before leaves | .. .. . | <i>Amorphophallus</i> |
| 2. Inflorescences appearing with leaves: | | |
| 3. Petioles under 25 cm long | .. .. . | <i>Theriophonum</i> |
| 3. Petioles over 30 cm long | .. .. . | <i>Colocasia</i> |

Amorphophallus Blume ex Decene. (*nom.cons.*)

Amorphophallus sylvaticus (Roxb.) Kunth, Enum.Pl.3:34. 1841; FPM 1107; Barnes 43; Sivadasan & Nicolson in Matthew, Fl. Tamilnadu Carnatic 3:1687. 1983. *Arum sylvaticum* Roxb. Fl.Ind. 3:511. 1832. *Synantherias sylvatica* (Roxb.) Schott, Gen.Aroid. t.28. 1858; FBI 6:518.

Herbs, up to 35 cm tall; corms c. 6 cm across. Leaf blades 10-20 cm across, palmately lobed. Peduncle mottled; spadices longer than spathes, with lower pistillate, middle neuter and upper staminate flowers. Berries c. 1 cm across, orange-yellow.

On rocky soils; rare. Fl.: July-August. Fr.: August-October. Tamil: Kaattu Karunai.

Amorphophallus campanulatus (Roxb.) Blume ex Decne. in Nouv. Ann. Mus.Hist. Nat. (Paris) 3:366. 1834; Brown 196; FBI 6:513; FPM 1107; Mayur. 299. *Arum campanulatum* Roxb. Pl.Cor. 3:68. t.272. 1820.

Cultivated for the edible corm. Tamil. Karunai Kizhangu, Chaenai Kizhangu.

Colocasia Schott (nom.cons.)

Colocasia esculenta (L.) Schott in Schott & Endl. Melet. Bot.18. 1832; Sivadasan & Nicolson in Matthew, Fl. Tamilnadu Carnatic 3:1691. 1983. *Arum esculentum* L. Sp.P1.985. 1753. *Colocasia antiquorum* Schott in Schott & Endl. Melet. Bot. 18. 1832; Brown 196; FBI 6:523; FPM 1162; Mayur. 300.

Herbs, up to 50 cm tall; corms c. 8 x 5 cm. Leaves radical; blades 15-30 x 10-20 cm, ovate-cordate. Spadices shorter than spathes, with lower pistillate, middle neuter and upper staminate flowers; spathes 15-20 cm long, pale yellow, apex acuminate.

Occasionally cultivated in gardens. Fl. & Fr.: September-December.

Tubers cooked and eaten. Leaves used as greens. Tamil: Chaembu.

Pistia L.

Pistia stratiotes L. Sp.P1. 963. 1753; Brown 199; FBI 6:197; FPM 1097; Mayur. 299; Sivadasan & Nicolson in Matthew, Fl. Tamilnadu Carnatic 3:1696. 1983.

Aquatic herbs. Leaves 2-5 x 1.8-4.8 cm, rosulate, obovate, tomentose, base cuneate, apex obtuse to truncate. Male spadices with a whole of neuters below and staminate flowers above; female spadices with a solitary ovary; spathes tubular below and dilated above. Berries ovoid.

A floating weed of fresh-water ponds and lakes; fairly common. Fl. & Fr.: December-March.

Theriophonum Blume

Theriophonum minutum (Willd.) Baillon in Hist. P1. 13:457. 1895; FPM 110F; Barnes 41; Sivadasan & Nicolson in Kew Bull. 37:285. 1982 & in Matthew, Fl. Tamilnadu Carnatic 3:1699. 1983. *Arum minutum* Willd. Sp.P1. 4:484. 1805. *Theriophonum wightii* Schott, Oesterr. Bot.Zect. 8:3. 1858; FBI 6:512; FPM 1101; Barnes 42. *Typhonium divaricatum* auct. non Decne. 1834; Mayur 300.

Herbs, up to 20 cm tall; corms c. 3 cm across. Leaves radical; blade 4-10 x 3-8 cm, reniform to ovate or suborbicular, sometimes 3-angled or 3-lobed. Spadices shorter than spathes, with basal pistillate and long neuter flowers and upper staminate and short neuter flowers. Berries c. 8 mm across.

A weed of shady places near jungles; fairly common. Fl. & Fr.: September-December.

LEMNACEAE

- | | | |
|------------------------------|-------|------------------|
| 1. Fronds with roots: | | |
| 2. Roots only one per frond | .. .. | <i>Lemna</i> |
| 2. Roots 2 or more per frond | .. .. | <i>Spirodela</i> |
| 1. Fronds without roots | .. .. | <i>Wolffia</i> |

Lemna L.

Lemna perpusilla Torrey, Fl.N.Y. 2:245. 1843; Plas in Steenis, Fl. Males.ser. 1.7:231. 1971; Hepper in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 2:398. 1981. *L. paucicostata* Heglm. Lemnac. 139. t.8.1868; FBI 6:556; FPM 1111; Mayur. 301; Subram. Aquat. Angiosp. 78. 1962.

Fronds 2-4 x 0.8-2.5 mm, ovate to oblong, 1-3-veined. Reproductive pouches 2, lateral; spathes membranous; staminate flowers 2 and pistillate flower one. Fruits ovoid.

An aquatic, floating weed of ponds, ditches, rice fields etc.; common. Fl. & Fr. February-April.

Spirodela Schleid.

Spirodela polyrhiza (L.) Schleid. in Linnaea 13:392. 1839; Subram. Aquat. Angiosp. 77. 1962; Plas in Steenis, Fl. Males. ser. 1.7:224. 1971. *Lemna polyrhiza* L. Sp.P1. 970. 1753; FBI 6:557; FPM 1111.

Fronds 5-10 x 3-6 mm, ovate-orbicular, 5-18-veined, purplish beneath. Staminate flowers 2-3 and pistillate flowers solitary; spathes membranous. Utricles winged.

An aquatic, floating weed of ponds, ditches, rice fields etc.; fairly common. Fl.: January-April.

Wolffia Horkel ex Schleid. (*nom.cons.*)

Wolffia globosa (Roxb.) Hartog & Plas in Blumea 18:367. 1970; Plas in Steenis, Fl. Males.ser. 1.7:236. 1971. *Lemna globosa* Roxb. Fl.Ind. 3:565. 1832; Brown 198. *Wolffia arrhiza* auct. non Horkel ex Wimm. 1857; FBI 6:557; FPM 1111; Subram. Aquat. Angiosp. 79.1962.

Fronds 1-1.5 x 0.05-1 mm, ellipsoid or subglobose, without veins. Reproductive pouch one, basal, funnelform, vegetative; flowers in a median adaxial groove; stamen one; stigma concave; spathe absent. Utricles subglobose.

An aquatic floating weed of ponds, ditches, rice fields etc.; fairly common. Fl. & Fr.: January-April.

ALISMATACEAE

Limnophyton Miq.

Limnophyton obtusifolium (L.) Miq. Fl.Ned. Ind. 3:242. 1855; FBI 6:560; FPM 1113; Mayur. 301; Hartog in Steenis, Fl. Males. ser. 1.5:324. 1957. *Sagittaria obtusifolia* L. Sp. P1. 993. 1753.

Aquatic herbs, up to 80 cm tall. Leaves radical; blades 10-15 x 6-10 cm, sagittate, base cordate or hastate. Panicles branched; flowers c. 8 mm across, white, in whorls, bisexual in lower whorls and staminate in upper whorls; carpels many, distinct. Achenes obovate.

A weed of fresh-water ponds and canals; rare. Fl. & Fr.: January-April.

NAJADACEAE

Najas L.

Leaves with more than 30 spinules on each margin	.. .. .	<i>N. graminea</i>
Leaves with less than 20 spinules on each margin	.. .. .	<i>N. indica</i>

Najas graminea Del. Descr. Egypt. Hist. Nat. 282. t. 50. f. 3. 1813; FBI 6:569; FPM 1118; Wilde in Steenis, Fl. Males. ser. 1.6:169. 1962; Subram. Aquat. Angiosp. 100. 1962.

Submerged aquatic herbs; stems filiform. Leaves 1.5-2.7 x 0.2-0.4 cm, linear, sheathing at base. Flowers minute, axillary; staminate flowers with a single stamen and pistillate ones with a single carpel; spathe absent. Achenes minute, ellipsoid.

A weed of fresh-water ponds, ditches etc.; rare. Fl. & Fr.: March-April.

Najas indica (Willd.) Cham. in Linnaea 4:501. 1829; FPM 1119; Wilde 166; Subram. 101. *Caulinia indica* Willd in Mem. Acad. Roy. Sci. Hist. (Berlin) 1798:89. t. 1. f. 3. 1801. *Najas falciculata* Braun in J. Bot. 2:278. 1864; FBI 6:569; FPM 1119. *N. lacerata* Rendle in Trans. Linn. Soc. (London) 5:416. t. 41. f. 132. 1899; FPM 1119.

Submerged aquatic herbs; stems filiform. Leaves 2-4 x 0.3-0.5 cm, linear, sheathing at base. Spathes of staminate flowers with an irregularly toothed mouth and those of pistillate flowers with a neck ending in a spinulose mouth. Achenes minute, enclosed in persistent spathe.

A weed of fresh-water ditches and lakes; rare. Fl. & Fr.: February-April.

Ruppia maritima L. Sp. Pl. 127. 1753; FPM 1116; Mayur. 302; FTN 3:61.

Mayuranathan records this.

APONOGETONACEAE

Aponogeton L.f.

Aponogeton natans (L.) Engler & Krause in Engler, Pflanzenr. 24:22. 1906; FPM 1115; Subram. Aquat. Angiosp. 92. 1962; Bruggen in Blumea 18:477. 1970. *Saururus natans* L. Mant. Alt. 227. 1771. *Aponogeton monostachyon* L.f. Suppl. Pl. 214. 1718; FBI 6:564; Mayur. 303.

Aquatic herbs, up to 30 cm tall; corms c. 2 cm across. Leaves radical; blade 8-15 x 2-5 cm, oblong to linear-lanceate. Spikes emergent, dense-flowered above; flowers c. 5 cm across, pale violet. Follicles subglobose.

A weed of fresh-water ditches, ponds etc.; common. Fl. & Fr.: October-March.

Tribals (Irulas) cook the corms and eat. Tamil: Kottik kizhangu.

POTAMOGETONACEAE

Potamogeton L.

Potamogeton nodosus Poir. in Lam. Encycl. Suppl. 4:535. 1816; Dandy in J. Linn. Soc. 50:531. 1937; Subram. Aquat. Angiosp. 95. 1962. *P. indicus* Roxb. Fl. Ind. 1:471. 1820 non Roth ex Roem. & Schult. 1818; FBI 6:565; FPM 1116; Mayur. 302.

Aquatic herbs; stems jointed, rooting at lower nodes. Leaves 3-8 x 2-4 cm, elliptic-lanceate to oblong or suborbicular. Spikes 2-4 cm long, axillary or leaf-opposed, dense-flowered. Drupelets shortly beaked, 1-seeded.

A weed of fresh-water ditches, rivers and lakes; rare. Fl. & Fr.: January-April.

Potamogeton pectinatus L. Sp.Pl. 127. 1753; FBI 6:567; Aschers. & Graeb. in Engler, Pflanzenr. 31:121. f. 28 A-B. 1907; FPM 1116; Mayur. 303; Dandy 513; Subram. 95.

Mayuranathan records this.

ERIOCAULACEAE

Eriocaulon L.

Leaves under 2 mm across at base

.. .. . *E. cinereum*

Leaves over 3 mm across at base

.. .. . *E. quinquangulare*

Eriocaulon cinereum R.Br. Prodr. 254. 1810; Santapau in RBSI ed. 3. 16: 294. 1967; Matthew & Britto in Matthew, Fl. Tamilnadu Carnatic 3:1719. 1983. *E. sieboldianum* Siebold & Zucc. ex Steud. Syn. Pl. Glum. 2:272. 1855; FBI 6:577; Fyson in JIBS 3:15. 1924; FPM 1127; Mayur. 303.

Annual herbs; stems up to 5 cm tall, very slender. Leaves 1-3 cm long, linear-subulate. Heads c. 1.7 mm across; outer involucral bracts obovate-oblong and inner ones narrower; floral bracts linear-oblong. Seeds reddish-brown, finely striate.

A weed of moist and marshy places; rare. Fl. & Fr.: December-April.

Eriocaulon quinquangulare L. Sp.Pl. 87. 1753; FBI 6:582; Fyson in JIBS 2:204. 1921; FPM 1128; Mayur. 304; Matthew & Britto 1721.

Annual herbs; stems up to 12 cm tall, slender. Leaves 3-8 x 0.3-0.8 cm, linear-lanceate, 5-11-nerved, purplish beneath. Heads c. 5 mm across, white; involucral bracts obovate, often concealed under head; floral bracts obovate-oblongate. Seeds pale brown.

A semiaquatic weed of marshy places, rice fields etc.; common. Fl. & Fr.: January-April.

CYPERACEAE

- | | | |
|---|-------|-----------------------|
| 1. Leaves reduced to sheaths: | | |
| 2. Glumes distichous | .. .. | <i>Cyperus</i> p.p. |
| 2. Glumes spiral: | | |
| 3. Inflorescence of only one spikelet | .. .. | <i>Eleocharis</i> |
| 3. Inflorescence of 3 or more spikelets | .. .. | <i>Schoenoplectus</i> |
| 1. Leaves not reduced to sheaths: | | |
| 4. Flowers unisexual | .. .. | <i>Scleria</i> |
| 4. Flowers bisexual: | | |
| 5. Glumes distichous: | | |
| 6. Rachilla breaking at base when mature: | | |
| 7. Stigmas 2 | .. .. | <i>Kyllinga</i> |
| 7. Stigmas 3 | .. .. | <i>Mariscus</i> |
| 6. Rachilla not breaking at base when mature: | | |
| 8. Stigmas 2: | | |
| 9. Inflorescences capitate | .. .. | <i>Cyperus</i> p.p. |
| 9. Inflorescences not capitate | .. .. | <i>Pycnus</i> |
| 8. Stigmas 3 | .. .. | <i>Cyperus</i> p.p. |
| 5. Glumes spiral (at least towards apex): | | |
| 10. Hypogynous scales or bristles present: | | |
| 11. Leaves radical | .. .. | <i>Lipocarpa</i> |
| 11. Leaves radical and cauline | .. .. | <i>Fuirena</i> |
| 10. Hypogynous scales or bristles absent: | | |
| 12. Styles swollen at base: | | |
| 13. Swollen stilar bases persistent in nuts | .. .. | <i>Bulbostylis</i> |
| 13. Swollen stilar bases deciduous | .. .. | <i>Fimbristylis</i> |
| 12. Styles not swollen at base | .. .. | <i>Riklilla</i> |

***Bulbostylis* Kunth (nom.cons.)**

Bulbostylis barbata (Rottb.) Kunth ex Clarke in Hook. f. Fl. Brit. India 6:651. 1893; FPM 1153; Kern in Steenis, Fl. Males. ser. 1.7:539. 1974; Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:327. 1985. *Scirpus barbatus* Rottb. Progr. 27. 1772. *Stenophyllus barbatus* (Rottb.) Cook, Fl. Pres. Bombay 2:887. 1908; Mayur. 313.

Annual herbs; culms up to 25 cm tall. Leaves 4-9 cm long, filiform. Inflorescence a terminal head, 15-10 mm across; bracts 1-3, each up to 2.5 cm long; spikelets 3-8 x 1-1.5 mm; glumes ovate, awned at apex; stamen 1; stigmas 3. Achenes obovate-orbicular.

A weed of open grounds, often in sandy places; common. Fl. & Fr.: November-April.

***Cyperus* L.**

- | | | |
|--------------------------------|-------|-------------------------|
| 1. Inflorescence capitate: | | |
| 2. Spikelets compressed: | | |
| 3. Spikelets ovate | .. .. | <i>C. pygmaeus</i> |
| 3. Spikelets ovate: | | |
| 4. Glumes ovate | .. .. | <i>C. rubriglomosus</i> |
| 4. Glumes oblong to oblanceate | .. .. | <i>C. castaneus</i> |
| 2. Spikelets not compressed | .. .. | <i>C. arenarius</i> |

1. Inflorescence not capitate:
 5. Spikelets digitately arranged:
 6. Glumes awned at apex *C. cuspidatus*
 6. Glumes not awned at apex:
 7. Plants with conspicuous rhizomes *C. halpan*
 7. Plants without conspicuous rhizomes:
 8. Glumes suborbicular *C. difformis*
 8. Glumes ovate or ovate-oblong *C. tenuispica*
 5. Spikelets spicately arranged:
 9. Rachilla of spikelets winged:
 10. Spikes cylindrical *C. exaltatus*
 10. Spikes ellipsoid or ovoid:
 11. Plants with creeping rhizomes or stolons:
 12. Culms over 4 mm wide:
 13. Glumes ovate-lanceate, acute at apex *C. corymbosus*
 13. Glumes oblong, obtuse at apex *C. pangorei*
 12. Culms under 3 mm wide:
 14. Leaves much shorter than culms *C. rotundus*
 14. Leaves nearly as long as culms *C. stoloniferus*
 11. Plants without creeping rhizomes or stolons *C. distans*
 9. Rachilla of spikelets not winged:
 15. Plants with stolons *C. procerus*
 15. Plants without stolons:
 16. Glumes acute at apex *C. compressus*
 16. Glumes obtuse at apex *C. iria*

Cyperus arenarius Retz. Obs. Bot. 4:9. 1786; FBI 6:602; FPM 1140; Mayur. 306; Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:208. 1985.

Perennial herbs with slender, long, creeping rhizomes; culms up to 20 cm tall. Leaves 6-18 x 0.1-0.3 cm, linear. Leafy bracts up to 10 cm long, erect; spikelets 6-12 x 2-5 mm; glumes ovate; stamens 3. Achenes obovate.

A weed along sandy seashores; fairly common. Fl. & Fr.: October-April.

Cyperus castaneus Willd. Sp. Pl. 1: 278. 1797; FPM 1139; Koyama 207; FTN 3:68.

Annual herbs; culms up to 6 cm tall, 3-angled. Leaves up to 5 cm long, filiform. Leafy bracts 2-5, longer than the inflorescence; spikelets congested, purplish; glumes oblong to oblanceate. Achenes oblong.

In open grounds; common. Fl. & Fr.: October-February.

Cyperus compressus L. Sp. Pl. 46. 1753; FBI 6:605; FPM 1140; Mayur. 307; Kern in Steenis, Fl. Males. ser. 1.7:617. 1974; Koyama 194.

Annual herbs; culms up to 30 cm tall. Leaves 8-26 x 0.2-0.4 cm, linear. Leafy bracts up to 25 cm long; rays up to 15 cm long; spikes with 3-10 spikelets; spikelets 10-25 x 2-4 mm; glumes ovate, folded and keeled; stamens 3. Achenes obovate.

A weed of ditches, rice fields and other moist places; common. Fl. & Fr.: October-March.

Cyperus corymbosus Rottb. Descr. Icon. Rar. 42.t.7.f.4. 1773; FBI 6:612; FPM 1140; Mayur. 306; Koyama 175.

Perennial herbs with creeping rhizomes; culms up to 1.2 m tall, subterete. Leaves up to 30 cm long, often reduced to sheaths. Leafy bracts up to 3.5 cm long; primary rays up to 10 cm long; secondary rays 1-2 cm long; spikes with 8-12 spikelets; spikelets 5-18 mm long; glumes ovate-oblong; stamens 3. Achenes oblong.

A weed of rice fields and ditches; fairly common. Fl. & Fr.: November-April.

Cyperus cuspidatus Kunth, Nov. Gen. Pl. 1:204. 1815; FBI 6:598; Kern 629; Koyama 208. *C. uncinatus* auct. non Poir. 1806; FPM 1139.

Annual herbs; culms up to 8 cm tall. Leaves 1-3 x 0.05-0.1 cm, filiform. Leafy bracts up to 4 cm long; rays up to 3 cm long; spikelets stellately clustered, 0.5-1.5 cm long; glumes oblong-elliptic; stamens 2-3. Achenes obovate.

A weed of rice fields and in moist places near scrub jungles; common. Fl. & Fr.: November-March.

Cyperus difformis L. in Torner, Cent. Pl. 2:6. 1756; FBI 6:599; FPM 1139; Kern 629; Koyama 206.

Annual herbs; culms up to 40 cm tall, strongly 3-angled with concave sides. Leaves 10-30 x 0.2-0.5 cm, linear. Leafy bracts up to 20 cm long; rays up to 4 cm long; spikelets often congested, each 2-8 mm long, linear; glumes suborbicular; stamens 1-2. Achenes obovate-elliptic.

A weed of marshy places near lakes and rice fields; common. Fl. & Fr.: October-March.

Cyperus distans L.f. Suppl. Pl. 103. 1781; FBI 6:607; FPM 1140; Kern 610; Koyama 189.

Perennial herbs with short rhizomes; culms up to 50 cm tall. Leaves shorter than or as long as culms. Leafy bracts up to 30 cm long; rays up to 15 cm long; spikes with 8-15 spikelets; spikelets 8-30 mm long, subterete; glumes ovate-elliptic; stamens 3. Achenes oblong ellipsoid.

A weed of moist places near scrub jungles and roadsides; common. Fl. & Fr.: November-March.

Cyperus exaltatus Retz. Obs. Bot. 5:11. 1789; FBI 6: 617; FPM 1141; Mayur. 306; Kern 602; Koyama 173.

Perennial herbs with short, woody rhizomes; culms up to 1.2 m tall. Leaves 50-100 x 0.5-1.2 cm, linear. Leafy bracts up to 6 cm long; primary rays up to 12 cm long; secondary rays 1-5 cm long; spikes digitate, with 20-30 spikelets; spikelets 4-10 mm long; glumes ovate; stamens 3. Achenes ellipsoid.

A weed of ditches and lakes; fairly common. Fl. & Fr.: December-March.

Cyperus halpan L. Sp.Pl. 45. 1753; FBI 6:600; FPM 1139; Mayur. 307; Kern 624; Koyama 203.

Perennial herbs with short rhizomes; culms up to 40 cm tall. Leaves 2-20 x 0.2-0.4 cm, linear, sometimes reduced to sheaths. Leafy bracts up to 15 cm long; primary rays up to 8 cm long; secondary rays 1-2 cm long; spikelets 5-10 mm long; glumes ovate-elliptic; stamens 1-3. Achenes obovoid.

A weed of moist and marshy places; rare. Fl. & Fr.: November-March.

Cyperus iria L. Sp.Pl. 45. 1753; FBI 6:606; FPM 1140; Kern 616; Koyama 196.

Annual herbs; culms up to 50 cm tall. Leaves 5-40 x 0.2-0.5 cm, linear. Leafy bracts up to 30 cm long; primary rays up to 12 cm long, often much branched; spikelets up to 10 x 2 mm; glumes obovate-orbicular; stamens 2-3. Achenes obovate.

A weed of marshy places, ditches, rice fields etc.; common. Fl. & Fr.: November-April.

Cyperus pangorei Rottb. Descr. Icon. Rar. 31.t.7.f.3. 1773; FPM 1140; Koyama 176. *C. tegetum* Roxb. Fl.Ind. 1: 211. 1820; FBI 6:613; Mayur. 306.

Perennial herbs with ascending rhizomes; culms up to 1.2 m tall. Leaves up to 20 cm long, often reduced to sheaths. Leafy bracts up to 20 cm long; rays up to 8 cm long; spikelets 5-12, spicate, 1-2 cm long; glumes oblong; stamens 3. Achenes oblong-obovoid.

A weed along canals and rice fields; rare. Fl. & Fr.: October-March.

Cyperus procerus Rottb. Descr. Icon. Rar. 29.t.5.f. 3. 1773; FBI 6:610; FPM 1140; Mayur. 305; Kern 611; Koyama 192.

Perennial herbs with stoloniferous rhizomes; culms up to 80 cm tall. Leaves 30-60 x 0.5-1 cm, linear. Leafy bracts up to 5 cm long; primary rays up to 15 cm long; secondary rays up to 2 cm long; spikes with 4-6 spikelets; spikelets 1-8 cm long; glumes ovate; stamens 3. Achenes ellipsoid.

A weed of marshy places and rice fields; rare. Fl. & Fr.: November-March.

Cyperus pygmaeus Rottb. Descr. Icon. Rar. 20. t.14.ff. 4 & 5. 1773; Kern 634; Koyama 214. *Juncellus pygmaeus* (Rottb.) Clarke in Hook.f. Fl. Brit. India 6:596 . 1893; FPM 1133; Mayur. 310.

Annual herbs; culms up to 20 cm tall. Leaves 2-18 x 0.1-0.3 cm, linear. Leafy bracts up to 12 cm long; spikelets 3-5 x 1-2.5 mm, ovate; glumes lanceate; stamens 1-2. Achenes ovate-oblong, planoconvex.

A weed of moist and marshy places; rare. Fl. & Fr.: November-March.

Cyperus rotundus L. Sp.Pl. 45. 1753; Wood 2811; FBI 6:614; FPM 1140; Mayur. 307; Kern 604; Koyama 181.

Perennial herbs with slender stolons terminated by subglobose tubers; culms up to 35 cm tall. Leaves 5-15 x 0.2-0.5 cm, linear. Leafy bracts 3-5 x 0.2-0.4 cm; primary rays up to 6 cm long; spikes with 3-10 spikelets; spikelets 1-3 cm long; glumes ovate-elliptic; stamens 3. Achenes obovoid-oblong.

A weed of waste places, gardens and open fields; very common. Fl. & Fr.: throughout the year.

Cyperus rubrigitulosus Govind. in Proc. Indian Acad. Sci. 88 B(3):229. 1979.

Annual herbs with horizontally creeping stolons; culms up to 8 cm tall. Leaves 2-4 x 0.05-0.1 cm, subterete. Leafy bracts 1-2; spikelets 2-4 per inflorescence; glumes keeled; stamens 2. Achenes ellipsoid-globose.

A weed of moist places; very rare. Fl. & Fr.: October-December.

Cyperus stoloniferus Retz. Obs. Bot. 4:10. 1786; FBI 6:615; FPM 1141; Mayur. 307; Kern 606; Koyama 180.

Perennial herbs with creeping rhizomes; culms up to 30 cm long. Leaves 5-25 x 0.2-0.4 cm, linear. Leafy bracts 5-20 x 0.2-0.3 cm; rays up to 5 cm long; spikes with 3-8 spikelets; glumes ovate-orbicular; stamens 3. Achenes ovoid.

A weed along canals and lakes; rare. Fl. & Fr.: November-March.

Cyperus tenuispica Steud. Syn. Pl. Glum. 2:11. 1855; FPM 1139; Kern 625; Koyama 205. *C. flavidus* auct. non Retz. 1789; FBI 6:600; Mayur. 308.

Annual herbs; culms up to 30 cm tall. Leaves 5-20 x 0.2-0.3 cm, linear, sometimes reduced to sheaths. Leafy bracts up to 17 cm long; primary rays up to 10 cm long; secondary rays c. 2 cm long; spikelets linear-oblong; glumes ovate-oblong; stamens 1-2. Achenes globose-obovoid.

A weed of moist places around scrub jungles and rice fields; common. Fl. & Fr.: October-March.

Eleocharis R.Br.

Stems transversely septate within;

spikelets cylindric

.. .. *E. dulcis*

Stems not transversely septate within;

spikelets subglobose

.. .. *E. geniculata*

Eleocharis dulcis (Burm.f.) Henschel. Vita Rumphii 186. 1833; Kern in Steenis, Fl. Males. ser. 1.7:529. 1974; Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:259. 1985. *Andropogon dulce* Burm. f. Fl. Ind. 219. 1768. *Eleocharis plantaginea* (Retz.) Roem. & Schult. Syst. Veg. 2:150. 1817; FBI 76:625; FPM 1145. *Scirpus plantagineus* Retz. Obs. Bot. 5:14. 1799.

Perennial herbs with long stolons terminated by small tubers; culms up to 80 cm tall, terete, hollow. Leaves reduced to sheaths, up to 15 cm long. Spikelets 3-5 cm long; glumes elliptic to obovate-oblong; stamens 3; hypogynous bristles 6-8. Achenes obovoid.

A semiaquatic weed along ditches, ponds and rice fields; rare. Fl. & Fr.: December-March.

Eleocharis geniculata (L.) Roem. & Schult. Syst. Veg. 2:150. 1817; Kern 536; Koyama 264. *Scirpus geniculatus* L. Sp. Pl. 48. 1753. *Eleocharis capitata* R. Br. Prodr. 225. 1810; FBI 6:627; FPM 1145; Mayur. 314.

Annual herbs; culms densely tufted, up to 25 cm tall. Leaves reduced to sheaths. Spikelets 3-7 x 2-4 mm, ovoid-ellipsoid to subglobose; glumes ovate to elliptic; stamens 2-3; hypogynous bristles 6-8; styles 2-fid at apex. Achenes obovoid.

A semiaquatic weed of ditches and near rice fields; fairly common. Fl. & Fr.: December-April.

Fimbristylis Vahl (*nom.cons.*)

- | | | |
|---|---------|--------------------------|
| 1. Spikelets usually 1 or 2 on a stem, rarely 3: | | |
| 2. Styles 2-fid: | | |
| 3. Glumes lanceate | .. .. . | <i>F. polytrichoides</i> |
| 3. Glumes ovate-orbicular | .. .. . | <i>F. schoenoides</i> |
| 2. Styles 3-fid | .. .. . | <i>F. ovata</i> |
| 1. Spikelets usually many on a stem, rarely 4 or 5: | | |
| 4. All spikelets sessile | .. .. . | <i>F. argentea</i> |
| 4. All or most spikelets stalked: | | |
| 5. Stamen one | .. .. . | <i>F. miliacea</i> |
| 5. Stamen 2 or 3: | | |
| 6. Styles fimbriate or long-ciliate towards apex: | | |
| 7. Glumes glabrous: | | |
| 8. Plants with woody rhizomes | .. .. . | <i>F. eligulata</i> |
| 8. Plants without woody rhizomes | .. .. . | <i>F. dichotoma</i> |
| 7. Glumes pubescent | .. .. . | <i>F. ferruginea</i> |
| 6. Styles glabrous throughout | .. .. . | <i>F. cymosa</i> |

Fimbristylis argentea (Rottb.) Vahl, Enum. Pl. 2:294. 1806; FBI 6:640; FPM 1151; Mayur. 311; Kern in Steenis, Fl. Males. ser. 1.7:586. 1974; Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:314. 1985. *Scirpus argenteus* Rottb. Progr. 27. 1772.

Perennial herbs with very short rhizomes; culms up to 20 cm tall. Leaves 5-20 x 0.05-0.1 cm, linear-filiform, Heads 1-1.5 cm across, subglobose, terminal; leafy bracts up to 8 cm long; spikelets 3-6 x 1-1.5 mm; glumes ovate; stamen 1; stigmas 2. Achenes obovoid.

A weed of moist and marshy places; rare. Fr. & Fr.: November-April.

Fimbristylis cymosa R.Br. Prodr. 228. 1810; Kern 557; Koyama 301. *F. spathacea* Roth, Nov. Pl. Sp. 24. 1821; FBI 6:640; FPM 1151; Mayur. 311.

Perennial herbs with short rhizomes; culms up to 40 cm tall, densely tufted. Leaves 5-25 x 0.1-0.3 cm, linear, subcoriaceous. Leafy bracts 1-3, shorter than corymbs; corymbs simple or compound; spikelets 2-5 x 1-2 mm; glumes ovate; stamens 2; stigmas 2-3. Achenes obovoid.

A weed of moist and marshy places; rare. Fl. & Fr.: December-March.

Fimbristylis dichotoma (L.) Vahl, Enum. Pl. 2:287. 1806; FBI 6:635; FPM 1151; Mayur. 311; Kern 575; Koyama 306. *Scirpus dichotomus* L. Sp. Pl. 50. 1753.

Annual or biennial herbs; culms up to 60 cm tall. Leaves 8-30 x 0.2-0.5 cm, linear. Bracts 2-7, the lower 1 or 2 leafy; rays 1-8 cm long; spikelets 4-8 x 2-3 mm, broadly ovate; stamens 2; stigmas 2. Achenes obovoid.

A weed of moist and marshy places; fairly common. Fr. & Fr.: December-March.

Fimbristylis eligulata Goind. in Proc. Indian Acad. Sci. 76 B (5):184. 1972.

Perennial herbs; rhizomes covered by fibrous strands of sheaths; culms up to 15 cm tall. Leaves 5-15 x 0.1-0.24 cm, glaucous, scabrid. Bracts 5-15 mm long; spikelets 1-3 cm long, ellipsoid; glumes ovate; stigmas 2. Achenes ellipsoid.

A weed of waste places near backwaters; rare. Fl. & Fr.: November-March.

Fimbristylis ferruginea (L.) Vahl, Enum. Pl. 2:291. 1806; FBI 6:638; FPM 1151; Mayur. 311; Kern 572; Koyama 305. *Scirpus ferrugineus* L. Sp. Pl. 50. 1753.

Perennial herbs with short rhizomes; culms up to 60 cm tall. Leaves 2-15 x 0.05-0.2 cm, linear. Leafy bracts 1-3, each up to 3 cm long; rays up to 4 cm long, each with 1-3 spikelets; spikelets 7-14 x 2-4 mm; glumes ovate-elliptic; stamens 3; stigmas 2. Achenes obovoid.

A semiaquatic weed of ditches and marshy places; rare. Fr. & Fr.: November-April.

Fimbristylis miliacea (L.) Vahl, Enum. Pl. 2:287. 1806; FBI 6:644; FPM 1152; Mayur. 312; Koyama 296. *Scirpus miliaceus* L. Syst. Nat. ed. 10. 2:868. 1179.

Annual herbs; culms tufted, up to 50 cm tall. Leaves 10-40 x 0.1-0.4 cm, linear, basal ones reduced to sheaths. Bracts setaceous; rays 1-5 cm long; spikelets 1.5-3 mm across, subglobose; glumes ovate; stigmas 3. Achenes obovoid.

A semiaquatic weed of rice fields and marshy places; rare. Fr. & Fr.: December-February.

Fimbristylis ovata (Burm.f.) Kern in Blumea 15:126. 1967; Koyama 273. *Carex ovata* Burm.f. Fl. Ind. 194. 1768. *Fimbristylis monostachya* (L.) Hassk. Pl. Jav. Rar. 61. 1848; FBI 6:649; FPM 1152; Mayur. 312. *Cyperus monostachyos* L. Mant. Alt. 180. 1771.

Perennial herbs with short, knotty rhizomes; culms up to 30 cm tall. Leaves 4-15 x 0.05-0.1 cm, filiform. Spikelets 8-14 x 3-6 mm; glumes ovate; lower glumes distichous and upper ones spiral; stamens 3. Achenes obovoid.

A weed of roadsides and waste places; very common. Fl. & Fr.: throughout the year.

Fimbristylis polytrichoides (Retz.) Vahl, Enum. Pl. 2: 248. 1806; FBI 6:632; FPM 1150; Koyama 318. *Scirpus polytrichoides* Retz. Obs. Bot. 4:11. 1789.

Annual or perennial herbs; culms up to 25 cm tall. Leaves up to 4 cm long, filiform, often reduced to sheaths. Inflorescence of a solitary terminal spikelet; bracts occasionally up to 1.2 cm long, often reduced to scales; spikelets 5-8 x 2-3.5 mm; glumes ovate; stamen 1. Achenes obovoid.

A weed of waste places along railway tracks and other moist places; rare. Fr. & Fr.: November-March.

Fimbristylis schoenoides (Retz.) Vahl, Enum. Pl. 2: 286. 1806; FBI 6:634; FPM 1150; Koyama 315. *Scirpus schoenoides* Retz. Obs. Bot. 5:14. 1791.

Annual herbs; culms up to 50 cm tall, slender. Leaves 2-15 x 0.05-0.1 cm, filiform. Inflorescence of 1-4 spikelets; spikelets 5-10 x 3-4 mm; glumes 2.5-3 x 2-3 mm; stamens 2. Achenes obovoid.

A weed along canals, ditches & rice fields; common. Fl. & Fr.: November-April.

Fuirena Rottb.

Fuirena ciliaris (L.) Roxb. Fl. Ind. 1:184. 1820; Kern in Steenis, Fl. Males. ser. 1.7:519. 1974. *Scirpus ciliaris* L. Mant. Alt. 182. 1771; Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:150. 1985. *Fuirena glomerata* Lam. Tabl. Encycl. 1:150. 1791; FBI 6:666; FPM 1158; Mayur. 313.

Annual herbs; culms up to 50 cm tall, 2-4-noded. Leaves mostly cauline, 6-15 x 0.3-0.6 cm, mostly linear, ligulate, margin ciliate. Inflorescences axillary, with glomerulous clusters of spikelets; spikelets 4-10 x 2-3 mm; glumes awned at apex; stamens 3; hypogynous bristles needle-like. Achenes obovoid.

A weed of moist places; rare. Fl. & Fr.: December-March.

Fuirena umbellata Rottb. Descr. Icon. Rar. 70.t. 19.f.3. 1773; FBI 6:666; FPM 1158; Mayur. 313; Kern 518; Koyama 148.

Mayuranathan records this.

Kyllinga Rottb. (nom.cons.)

Rhizomes stoloniferous	.. .. .	<i>K. nemoralis</i>
Rhizomes not stoloniferous	.. .. .	<i>K. bulbosa</i>

Kyllinga bulbosa Beauv. Fl. d'oware & Benin. 1:11.t.8.f.1. 1804; Koyama in Dassan. & Fosb. 245. *Kyllinga triceps* Rottb. Descr. Icon. Rar. 14.t.4.f.6. 1773 *nom. superfl.*; Wood 281; FBI 6:587; FPM 1130; Mayur. 309. *Cyperus triceps* (Rottb.) Endl. Cat. Hort. Vindb. 1:94. 1842; Kern 659.

Perennial herbs with short, erect rhizomes; culms up to 15 cm tall. Leaves 3-8 x 0.1-0.2 cm, linear. Inflorescence of a central globose head and 2-3 lateral closely appressed heads; leafy bracts 3-4; spikelets 1.5-2 x 0.4-0.6 mm; glumes ovate-oblong; stamens 2; stigmas 2. Achenes oblong.

A weed of open grounds; common. Fl. & Fr.: October-March.

Kyllinga nemoralis (Forst. & Forst.f.) Dandy ex Hutchinson & Dalz. Fl. W. Trop. Africa 2:486. 1936; Koyama in Gard. Bull. (Singapore) 30: 163. 1977 & in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:249. 1985. *Thryocephalon nemoralis* Forst. & Forst. f. Char. Gen. Pl. 130. 1776. *Kyllinga monocephala* Rottb. Descr. Icon. Rar. 13.t.4.f.4. 1773 *nom. superfl.*; Wood 281; FBI 6:588; FPM 1130; Mayur. 309.

Perennial herbs with long, creeping rhizomes; culms up to 40 cm tall, 3-angled. Leaves 15-30 x 0.2-0.4 cm, linear. Heads 5-7 x 4-6 mm; leafy bracts 3 or 4; spikelets 2.5-3.5 x 1.3-1.6 mm; glumes c. 5 in each spikelet, white; stamens 3; stigmas 2. Achenes obovoid.

A weed of waste places near scrub jungles; rare. Fl. & Fr.: November-March.

Lipocarpa R.Br. (nom.cons.)

Glumes deciduous; nuts flat or convex along sides	.. .. .	<i>L. chinensis</i>
Glumes persistent; nuts depressed along sides	.. .. .	<i>L. raynaleana</i>

Lipocarpa chinensis (Osbeck) Kern in Blumea Suppl. 4:167. 1958; Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:233. 1985; FTN 3:83. *Scirpus chinensis* Osbeck, Dagbok Ostind. Resa 220. 1757. *Lipocarpa argentea* (Vahl) R.Br. in Tucky, Narr. Exped. Zaire App. 477. 1818; FPM 1158. *Hypoelyptum argenteum* Vahl, Enum. Pl. 2:283. 1805.

Annual herbs; culms up to 25 cm tall. Leaves 4-20 x 0.1-0.2 cm, linear. Inflorescence 4-8 mm across, of 2-4 capitate spikes; leafy bracts 1-2; spikes ovoid-ellipsoid; glumes c. 1.2 mm long; stigmas 3. Achenes ellipsoid.

A weed of open moist grounds and sandy places; common. Fl. & Fr.: November-March.

Lipocarpa raynaleana Govind. in Adansonia ser. 2. 20(4):369. 1981.

Annual herbs; culms up to 12 cm tall. Leaves 5-15 x 0.08-0.1 cm, linear, rigid, curved. Inflorescence c. 1 cm across, of 3-4 capitate spikes; leafy bracts 2-3; spikelets ovate-oblong; glumes 2.5-3 x 1.5-1.6 mm; stamens 1-2; stigmas 3. Achenes ellipsoid-ovoid.

A weed of moist places near lakes; fairly common. Fl. & Fr.: December-March.

Mariscus Vahl (nom.cons.)

Glumes awned	.. .. .	<i>M. squarrosus</i>
Glumes not awned	.. .. .	<i>M. paniceus</i>

Mariscus paniceus (Rottb.) Vahl, Enum. Pl. 2:273. 1806; FPM 1143; Koyama in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 5:235. 1985. *Schoenoides paniceus* Rottb. Descr. Pl. Rar. 15. 1772. *Cyperus paniceus* (Rottb.) Boeckeler in Linnaea 36:381. 1870 p.p.; FTN 3:72.

Perennial herbs with short, woody rhizomes; culms up to 50 cm tall. Leaves 8-20 x 0.2-0.5 cm, linear. Inflorescence of 5-8 rays, sometimes capitate; spikes 1-3 cm long, subterete; leafy bracts 4-8; spikelets 3-6 x 1-1.5 mm; glumes elliptic; stamens 3; stigmas 3. Achenes ellipsoid.

A weed of roadsides and waste places near scrub jungles; rare. Fl. & Fr.: September-December.

Mariscus squarrosus (L.) Clarke in Hook. f. Fl. Brit. India 6:623. 1893; FPM 1143; Koyama 229. *Cyperus squarrosus* L. in Torner, Cent. Pl. 2:6. 1756; Kern 631. *C. aristatus* Rottb. Descr. Pl. Rar. 22. 1772; FBI 6:606; FPM 1140; Mayur. 308.

Annual herbs; culms up to 10 cm tall. Leaves 1-6 x 0.1-0.2 cm, linear. Rays 1-3, up to 3 cm long; bracts 2-3; spikes 0.5-2 cm long, ellipsoid-globose; spikelets 5-10 x 3-4 mm, subradiate; glumes elliptic; stamen 1; stigmas 3. Achenes oblong-obovoid.

A weed of open grounds, often on sandy soils; rare. Fl. & Fr.: October-February.

Mariscus dubius (Rottb.) Kueken. ex Fischer in Gamble & Fischer, Fl.Pres.Madras 1644. 1931 & 1142. 1957 (repr.ed.); Koyama 237. *Cyperus dubius* Rottb. Descr. Icon. Rar. 20.t.4.f.5. 1773; Kern 643. *Mariscus dregeanus* Kunth, Enum.Pl. 2:120. 1837; FBI 6:620; Mayur. 308.

Mayuranathan records this.

Pycreus Beauv.

Glumes truncate to emarginate at apex

.. .. . *P. pumilus*

Glumes acute to obtuse at apex

.. .. . *P. flavidus*

Pycreus flavidus (Retz.) Koyama in J. Jap.Bot. 51:313. 1976 & in Dassan. & Fosb. Rev.Handb. Fl.Ceylon 5:222. 1985. *Cyperus flavidus* Retz. Obs.Bot. 5:13. 1788; Kern in Steenis, Fl. Males.ser. 1.7:648. 1974. *Pycreus globosus* (All.) Reichb. Fl. Germ.Excurs. 140. 1830; FPM 1132. *Cyperus globosus* All.Fl. Pedem. Auct. 49. 1789. *Pycreus capillaris* (Koen. ex Roxb.) Nees ex Clarke in Hook.f.Fl. Brit. India 6:591. 1893; Mayur. 309. *Cyperus capillaris* Koen.ex Roxb. Fl.Ind. 1:198. 1820.

Annual or perennial herbs; culms up to 50 cm tall. Leaves 10-30 x 0.1-0.2 cm, linear-setaceous. Rays up to 7 cm long, sometimes much shorter; leafy bracts 2-4; spikelets 5-18 x 1-3 mm; glumes ovate-oblong; stigmas 2. Achenes obovoid-oblong.

A weed of rice fields and other moist places; fairly common. Fl. & Fr.: December-March.

Pycreus pumilus (L.) Nees ex Clarke in Hook.f.Fl. Brit. India 6:591. 1893; Domin in Biblioth. Bot. 85:417. 1915; FPM 1132. *Cyperus pumilus* L. in Torner, Cent. Pl. 2:6. 1756; Kern 650. *Pycreus nitens* (Retz.) Nees, Nov. Act.Acad.Caes. Leop. Carol.Nat.Cur. 19(Suppl. 1):53. 1843; FBI 6:591; Mayur. 309. *Cyperus nitens* Retz. Obs. Bot. 5:13. 1789.

Annual herbs; culms up to 20 cm tall. Leaves 8-22 x 0.1-0.2 cm, linear, filiform. Primary rays up to 3 cm long, often much shorter; leafy bracts 3-5; spikelets 3-8 x 1.5-2.5 mm, oblong-lanceate; glumes 1-1.6 x 1-1.2 mm, ovate-elliptic; stamens 2; stigmas 2. Achenes ellipsoid.

A weed of moist and marshy places; common. Fl. & Fr.: November-April.

Rikliella Raynal

Rikliella squarrosa (L.) Raynal in Adansonia 13:154. 1973; Koyama in Dassan. & Fosb.Rev. Handb.Fl. Ceylon 5:254. 1985. *Scirpus squarrosus* L. Mant. Alt. 181. 1771; FBI 6:663; FPM 1156; Mayur. 314; Kern in Steenis Fl. Males ser. 1.7:516. 1974.

Annual herbs; culms up to 20 cm tall. Leaves 1-5 x 0.05-0.1 cm, filiform. Inflorescence a pseudolateral head of 1-3 spikes; leafy bract 1, erect from stem apex; spikes 3-5 mm long, ovate-oblong; glumes obovate; stamens 1-2. Achenes obovoid.

A weed of moist places, especially sandy soils; common. Fl. & Fr.: November-February.

Schoenoplectus (Reichb.) Palla

Culms over 3 mm wide, transversely septate within	.. ..	<i>S. articulatus</i>
Culms under 2 mm wide, not transversely septate within	.. ..	<i>S. supinus</i>

Schoenoplectus articulatus (L.) Palla in Engler, Bot.Jahrb.Syst. 10:229. 1889; Koyama in Dassan. & Fosb.Rev.Handb. Fl. Ceylon 5:163. 1985. *Scirpus articulatus* L. Sp.Pl.47. 1753; FBI 6:656; FPM 1156; Mayur. 314; Kern in Steenis, Fl. Males.ser. 1.7:513. 1974.

Annual or perennial herbs; culms up to 50 cm tall, terete, hollow. Leaves reduced to sheaths, 3-15 cm long. Heads 2-3 cm across, pseudolateral on culms; bract 1, culm-like and erect, up to 50 cm long; spikelets 6-15 x 3-4 mm; glumes ovate; stamen 3; stigmas 3. Achenes obovoid.

A semiaquatic weed of lakes, ditches and rice fields; common. Fl. & Fr.: November-March.

Schoenoplectus supinus (L.) Palla subsp. *lateriflorus* (Gmel.) Koyama in Hara *et al.* Enum. Pl. Nepal. 1:119. 1978. *Scirpus lateriflorus* Gmel. Syst. Veg. 127. 1791. *S. supinus* auct. non L. 1753; FBI 6:655; FPM 1156; Mayur. 315.

Annual herbs; culms up to 35 cm tall, 3-angled. Leaves reduced to sheaths 5-15 cm long. Inflorescence pseudolateral, capitate or corymbose with short rays; bracts 1-2, the first up to 10 cm long, culm-like; spikelets 3-6 x 2-3 mm; glumes elliptic; stigmas 3. Achenes obovoid.

A weed of moist open grounds; fairly common. Fl. & Fr.: December-March.

Scleria Berg.

Scleria lithosperma (L.) Swartz, Prodr. Veg.Ind.Occ.18. 1788; FBI 6:685; FPM 1163; Kern in Steenis, Fl.Males. ser. 1.7:740. 1974; Koyama in Dassan. & Fosb.Rev.Handb.Fl. Ceylon 5:352. 1985. *Scirpus lithospermus* L.Sp.Pl. 51. 1753.

Perennial herbs; culms up to 60 cm tall with short, knotty rhizomes. Leaves 10-30 x 0.1-0.4 cm, linear. Inflorescence of 3-4 distantly borne panicles, sometimes spike-like; leafy bracts longer than panicles; spikelets 3-5 mm long; glumes subtending achenes 3-4 mm long, ovate. Achenes obovoid, white.

A weed along scrub jungles and thickets; rare. Fl. & Fr.: October-April.

POACEAE

(GRAMINEAE)

1. Leaf with a petiole-like base, articulated with sheath:
 2. Culms with thorny branches *Bambusa*
 2. Culms without thorny branches *Dendrocalamus*
1. Leaf without a petiole-like base, not articulated with sheath:
 3. Spikelets falling entire at maturity:
 4. Plants with all spikelets bisexual or with male/barren and bisexual spikelets freely mixed in the same inflorescence:
 5. Lower glume as long as spikelet and enclosing florets:
 6. Racemes subtended by a spathe:
 7. Leaves aromatic *Cymbopogon*
 7. Leaves not aromatic:
 8. Lower nodes of racemes with involucre spikelets *Ischilema*
 8. Lower nodes of racemes without involucre spikelets:
 9. Spikelets in threes *Apluda*
 9. Spikelets in twos *Andropogon*
 6. Racemes not subtended by a spathe:
 10. Sessile or hermaphrodite spikelets awned:
 11. Racemes solitary:
 12. Awns less than 3.5 cm long *Dichanthium* p.p.
 12. Awns more than 4 cm long *Heteropogon*
 11. Racemes 2 or more:
 13. Lower glume of sessile spikelets pitted *Bothriochloa*
 13. Lower glume of sessile spikelets not pitted:
 14. Raceme 1-noded *Chrysopogon*
 14. Raceme 2- or more-noded:
 15. Upper lemma of sessile spikelet reduced to a hyaline base of awn *Dichanthium* p.p.
 15. Upper lemma of sessile spikelet not as above:
 16. Inflorescence of a digitate raceme *Ischacum*
 16. Inflorescence of an effuse or somewhat contracted panicle *Vetiveria*
 10. All spikelets unawned:
 17. Inflorescence a panicle, silky-villous:
 18. Spikelets of each pair similar (both pedicelled) *Imperata*
 18. Spikelets of each pair dissimilar (one sessile and other pedicelled) *Saccharum*
 17. Inflorescence a spiciform raceme, not silky-villous:
 19. Racemes solitary:
 20. Lower glume with comb-like spines on margins *Eremochloa*
 20. Lower glume without comb-like spines on margins *Mnesithea*
 19. Racemes clustered *Ophiuros*
 5. Lower glume smaller than spikelet or completely suppressed:
 21. Lower glume and lowest internode of rachilla forming a swollen callus at the base of spikelet *Eriochloa*
 21. Lower glume and lowest internode of rachilla not forming a swollen callus at the base of spikelet:
 22. Spikelets subtended or surrounded by one or more bristles:
 23. Bristle solitary (prolongation of branch beyond terminal spikelet) *Pseudoraphis*
 23. Bristles 2 or more:

- | | | |
|---|-------|-------------------------|
| 24. Bristles connate at base forming a hard cup | .. .. | <i>Cenchrus</i> |
| 24. Bristles not as above: | | |
| 25. Upper lemma transversely rugose | .. .. | <i>Setaria</i> |
| 25. Upper lemma not transversely rugose | .. .. | <i>Pennisetum</i> |
| 22. Spikelets not subtended or surrounded by bristles: | | |
| 26. Plants dioecious; inflorescence a globose head | .. .. | <i>Spinifex</i> |
| 26. Plants not dioecious; inflorescence not a globose head: | | |
| 27. Spikelets in spiciform racemes: | | |
| 28. Spikelets c. 6 in a cluster, sunk in flat rachis | .. .. | <i>Trachys</i> |
| 28. Spikelets not as above: | | |
| 29. Lower glume well developed: | | |
| 30. Upper glume with brownish-purple hairs on margins | .. .. | <i>Alloteropsis</i> |
| 30. Upper glume without brownish-purple hairs on margins: | | |
| 31. Spikelets awned | .. .. | <i>Echinochloa</i> p.p. |
| 31. Spikelets unawned: | | |
| 32. Lower glumes turned towards rachis | .. .. | <i>Brachiaria</i> |
| 32. Lower glumes turned away from rachis: | | |
| 33. Spikelets paired | .. .. | <i>Echinochloa</i> p.p. |
| 33. Spikelets solitary | .. .. | <i>Paspalum</i> |
| 29. Lower glume reduced to a minute scale or absent: | | |
| 34. Spikelets binate | .. .. | <i>Digitaria</i> |
| 34. Spikelets solitary | .. .. | <i>Paspalum</i> |
| 27. Spikelets in panicles | .. .. | <i>Panicum</i> |
| 4. Plants with all spikelets unisexual, the male and female spikelets in separate inflorescences or in different parts of the same inflorescence. | | |
| 35. Male and female spikelets in same inflorescence | .. .. | <i>Coix</i> |
| 35. Male and female spikelets in different inflorescences | .. .. | <i>Zea</i> |
| 3. Spikelets breaking up at maturity: | | |
| 36. Inflorescences capitate: | | |
| 37. Lemmas 3-5-nerved | .. .. | <i>Coelachryopsis</i> |
| 37. Lemmas 7-9-nerved | .. .. | <i>Aeluropus</i> |
| 36. Inflorescences not capitate: | | |
| 38. Leaves more than 2 cm broad | .. .. | <i>Arundo</i> |
| 38. Leaves less than 1.5 cm broad: | | |
| 39. Awns trifid | .. .. | <i>Aristida</i> |
| 39. Awns simple or absent: | | |
| 40. Upper glume with hooked spines | .. .. | <i>Tragus</i> |
| 40. Upper glume without hooked spines: | | |
| 41. Lemma solitary: | | |
| 42. Stamens 6 | .. .. | <i>Oryza</i> |
| 42. Stamens 3: | | |
| 43. Inflorescence of solitary or digitate spikes or racemes: | | |
| 44. Glumes distinctly awned | .. .. | <i>Perotis</i> |
| 44. Glumes acute or aristulate: | | |
| 45. Spikes 2 or more, digitate | .. .. | <i>Cynodon</i> |
| 45. Spikes solitary: | | |
| 46. Spikelets lanceate, secund | .. .. | <i>Microchloa</i> |
| 46. Spikelets ovoid, spiral | .. .. | <i>Zoysia</i> |
| 43. Inflorescence an open panicle | .. .. | <i>Sporobolus</i> |
| 41. Lemmas 2 or more: | | |
| 47. Spikes digitate or subdigitate: | | |
| 48. Lemmas awned: | | |
| 49. Bisexual florets less than two in each spikelet | .. .. | <i>Chloris</i> |
| 49. Bisexual florets more than two in each spikelet | .. .. | <i>Dactyloctenium</i> |
| 48. Lemmas unawned | .. .. | <i>Eleusine</i> |
| 47. Spikes not digitate or subdigitate: | | |
| 50. Spikelets awned | .. .. | <i>Melanocenchris</i> |
| 50. Spikelets unawned: | | |
| 51. Inflorescence a solitary, spiciform raceme | .. .. | <i>Eragrostiella</i> |
| 51. Inflorescence not as above: | | |
| 52. Spikelets secund, sessile | .. .. | <i>Leptochloa</i> |
| 52. Spikelets not secund, pedicelled | .. .. | <i>Eragrostis</i> |

Aeluropus Trin.

Aeluropus lagopoides (L.) Trin. ex Thw.Enum.Pl.Zeyl. 374. 1864;FPM 1276; Bor 380. *Dactylis lagopoides* L.Mant.Pl.33. 1767. *Aeluropus villosus* Trin. ex Mey. Verz.Pfl.Cauc. 18. 1831; FBI 7:334.

Perennial herbs; culms up to 30 cm tall. Leaves up to 5 x 0.4 cm, distichous. Spikelets many-flowered; glumes membranous. Grains oblong or obovoid.

A weed along salt marshes; rare. Fl. & Fr.: December-March.

Alloteropsis Presl.

Alloteropsis cimicina (L.) Stapf in Prain, Fl.Trop.Afr. 9:487. 1919; FPM 1223; Bor 276. *Milium cimicinus* L. Mant. Alt. 184. 1771. *Axonopus cimicinus* (L.) Beauv. Ess.Agrost.12. 1812; FBI 7:64.

Annual herbs; culms up to 60 cm tall. Leaf blades 2-6 x 0.6-2 cm, ovate-lanceate or lanceate. Racemes 3-6, digitate, each up to 12 cm long; spikelets ovate to elliptic; lower glume 3-nerved and upper one 5-nerved. Grains ovoid.

A weed of roadsides near scrub jungles; fairly common. Fl. & Fr.: October-March.

Andropogon L.

Andropogon pumilus Roxb.Fl.Ind. 1:277. 1820; FBI 7:170; FPM 1215; Bor 93.

Annual herbs; culms up to 50 cm tall. Leaf blades 5-18 x 0.15-0.3 cm, linear. Racemes 1.5-2 cm long, paired, digitate; spikelets c. 5 mm long, linear-lanceate; sessile spikelets awned. Grains oblong.

A weed of open grounds, grasslands and waste places; fairly common. Fl. & Fr.: November-March.

Apluda L.

Apluda mutica L. Sp.Pl. 82. 1753; FPM 1212; Bor 93. *A. varia* Hack. subsp. *mutica* (L.) Hack. in DC. Monogr.Phan. 6:196. 1889; FBI 7:150; Rang. & Tad. 171.

Perennial herbs; culms up to 2 m tall. Leaf blades 10-40 x 0.3-1.2 cm, linear-lanceate. Spathes boat-shaped; sessile spikelets awned or unawned; lower glume 2-keeled; upper glume boat-shaped. Grains oblong.

A weed along roadsides and in scrub jungles; common. Fl. & Fr.: September-March.

Aristida L.

- | | | |
|---|---------|----------------------|
| 1. Lemmas articulated | .. .. . | <i>A. funiculata</i> |
| 1. Lemmas not articulated: | | |
| 2. Panicles contracted; rachis terete, glabrous | .. .. . | <i>A. setacea</i> |
| 2. Panicles effuse; rachis angled, scaberulent | .. .. . | <i>A. hystrix</i> |

Aristida funiculata Trin. et Rupr. Sp.Gram. Stip. 159. 1842; FBI 7:226; Rang. & Tad. 229; FPM 1253; Bor 410.

Annual herbs; culms up to 60 cm tall. Leaf blades 4-20 x 0.2-0.3 cm, linear. Panicles up to 25 cm long, lax; branches erect, capillary; glumes linear-oblong, membranous. Grains cylindric.

A weed of open grounds; fairly common. Fl. & Fr.: July-December.

Aristida hystrix L.f.Suppl. Pl. 113. 1778; FBI 7:225; Rang. & Tad. 225; FPM 1252; Bor. 410.

Perennial herbs; culms up to 80 cm long, decumbent. Leaf blades 6-30 x 0.2-0.3 cm, linear. Panicles up to 20 x 15 cm; glumes linear-oblong; setae three, the longest up to 4 cm long. Grains cylindric.

A weed of roadsides and waste places near scrub jungles; rare. Fl. & Fr.: December-March.

Aristida setacea Retz. Obs. Bot. 4:22. 1786; FBI 7:225; Rang. & Tad. 225; FPM 1252; Bor 412.

Perennial herbs; culms up to 1.2 m tall. Leaf blades 10-40 x 0.2-0.4 cm, linear. Spikelets bisexual; glumes 3; third glume with three setae c. 3 cm long. Grains cylindrical.

A weed of open waste places and near jungles; common. Fl. & Fr.: throughout the year.

Inflorescences tied together into brooms. Tamil: Thodappam pullu.

Arundo L.

Arundo donax L.Sp.Pl. 81. 1753; FBI 7:302; FPM 1250; Bor 413.

Perennial undershrubs with creeping rhizomes; culms up to 3 m tall. Leaf blades 20-40 x 2-5 cm, linear-lanceate. Panicles up to 40 cm long; pedicels scaberulous; spikelets up to 15 mm long; glumes oblong-lanceate. Grains oblong.

A weed along canals and rivers; rare. Fl. & Fr.: November-March.

Bambusa Schreb. (nom.cons.)

Bambusa arundinacea (Retz.) Roxb.Pl.Cor.t.79. 1796; FBI 7:395; Gamble, Bambuseae Brit. Ind. 28. 1896; FPM 1286; Cope in Nasir & Ali, Fl. Pak. 143: 14. 1982. *Bambos arundinacea* Retz. Obs.Bot. 5:24. 1788.

Leaf blades 5-15 x 1-2.5 cm, lanceate-elliptic. Spikelets 1-2.5 cm long, capitate on a compound panicle; glumes 1-3. Grains oblong.

In jungles, also cultivated; rare. Fl. & Fr.: December-April.

Bothriochloa Kuntze

Bothriochloa pertusa (L.) A. Camus in Ann.Soc. Linn. Lyon 1930, n.s. 76:164. 1931; Bor 109. *Holcus pertusus* L. Mant. Alt.301. 1771. *Amphilophis pertusa* (L.) Nash ex Stapf in Agric. News W.Ind. 15:179. 1916; FPM 1200. *Andropogon pertusus* (L.) Willd. Sp.Pl. 4:922. 1806; FBI 7:173; Rang. & Tad. 191.

Perennial herbs; culms up to 80 cm tall. Leaf blades 2-7 x 0.1-0.25 cm, linear. Panicles up to 8 cm long; racemes 3-8, subdigitate; sessile and pedicelled spikelets 3.5-4.2 mm long, elliptic-lanceate. Grains oblong.

A weed of open grounds, roadsides etc.; common. Fl. & Fr.: September-March.

Brachiaria (Trin.) Griseb.

- | | | |
|-------------------------------------|---------|-------------------|
| 1. Rachis more or less flat | .. .. . | <i>B. mutica</i> |
| 1. Rachis more or less triquetrous: | | |
| 2. Spikelets 1.25-2 mm long | .. .. . | <i>B. reptans</i> |
| 2. Spikelets 2.5-3 mm long | .. .. . | <i>B. ramosa</i> |

Brachiaria mutica (Forssk.) Stapf in Prain, Fl.Trop.Afr. 9:526. 1919; FPM 1226; Bor 284. **Panicum muticum** Forssk. Fl.Aegypt.-Arab. 20. 1775; FBI 7:34.

Perennial scandent herbs; culms up to 2 m long. Leaf blade 20-30 x 1-1.2 cm, glaucous. Spikelets 3-3.5 mm long, elliptic-lanceate; lower glume up to 1 mm long, ovate; upper glume elliptic-lanceate.

Cultivated in fields as fodder, also runs wild; rare. Fl. & Fr.: December-April.

Brachiaria ramosa (L.) Stapf in Prain, Fl.Trop.Afr. 9:542. 1919; FPM 1226; Bor 284. *Panicum ramosum* L.Mant.Pl. 29. 1767; FBI 7:36; Rang. & Tad. 89.

Annual herbs; culms up to 80 cm long. Leaf blades 10-30 x 2-3 cm, ovate-lanceate. Spikelets c. 2.5 mm long, obovate; lower glume 5-nerved; lower lemma 5-nerved; upper lemma rugose. Grains ellipsoid.

A weed of waste places; very rare. Fl. & Fr.: November-March.

Brachiaria reptans (L.) Gard.et Hubb. in Hook.Icones Pl.Sub 1.3363. 1938; Bor 285. *Panicum reptans* (L.) Syst.Nat.ed. 10. 870. 1759. *Urochloa reptans* (L.) Stapf in Prain, Fl.Trop.Afr. 9:601. 1920; FPM 1230. *Panicum prostratum* Lam. Tabl.Encycl. 1:171. 1791; FBI 7:33; Rang. & Tad. 83.

Annual herbs; culms up to 50 cm long. Leaf blades 1-8 x 0.8-1.5 cm, linear-lanceate. Racemes 1-3 cm long; rachis filiform; spikelets c. 2.2 mm long; lower glume semilunate; upper glume ovate. Grains ellipsoid.

A weed of open grounds and waste places; rare. Fl. & Fr.: September-February.

Cenchrus L.

Cenchrus ciliaris L.Mant. Alt. 302. 1771; FPM 1242; Bor 287. *Pennisetum cenchroides* Rich. in Pers. Syn. 1:72. 1805; FBI 7:88; Rang. & Tad. 118.

Perennial herbs; culms up to 50 cm long. Leaf blades 5-15 x 0.4-0.6 cm, linear-oblong. Panicles up to 5 cm long; bristles antrorsely barbellate; spikelets c. 4 mm long; glumes 1-nerved. Grains ellipsoid.

A weed of roadsides and open places; rare. Fl. & Fr.: December-April.

Chloris Sw.

Spikelets plump, with three, rarely four awns	.. ..	<i>C. barbata</i>
Spikelets cuneate, with four or five awns	.. ..	<i>C. montana</i>

Chloris barbata Sw.Fl.Ind.Occ. 1:200. 1797; FBI 7:292; Rang. & Tad. 264; FPM 1272; Bor 465.

Perennial herbs, culms up to 60 cm tall. Leaf blades 5-14 x 0.2-0.4 cm, linear. Spikes 4-10, spreading; spikelets c. 2.6 mm long, 2-seriate; lower glume c. 1.2 mm long; awn c. 5 mm long. Grains subtrigonal.

A weed of open grounds and waste places; common. Fl. & Fr.: throughout the year.

Chloris montana Roxb. Fl. Ind. 1:331. 1820; FBI 7:292; Rang. & Tad. 270; FPM 1272; Bor 466.

Perennial herbs, culms up to 40 cm tall. Leaf blades 3-15 x 0.2-0.3 cm, linear-lanceate. Spikes 3-6, erect; spikelets with solitary perfect floret and 3-4 imperfect florets above; glumes 2-3 mm long, oblong. Grains up to 2.5 mm long.

A weed of open grounds; rare. Fl. & Fr.: throughout the year.

Chrysopogon Trin. (nom.cons.)

Chrysopogon fulvus (Spreng.) Chiov. Fl. Somalia 1:327. 1929; Bor 116. *Pollinia fulva* Spreng. Pugill. 2:10. 1815. *Chrysopogon montanus* Trin.ex Spreng. Neue Entdeck. 2:93. 1821; FPM 1205. *Andropogon monticola* Roem. & Schult. Syst. Veg. 2:665. 1827; FBI 7:192; Rang. & Tad. 199.

Perennial herbs; culms up to 80 cm tall. Leaf blades 3-10 x 0.3-0.5 cm, linear. Panicles up to 7 x 3 cm; branches whorled, capillary; spikelets c. 8 mm long, in terminal triads. Grains compressed.

A weed of roadsides and waste places; fairly common. Fl. & Fr.: September-February.

Coelachryopsis Bor

Coelachryopsis lagopoides (Burm.f.) Bor in Ann.Naturhist. Mus.Wien. 75:25. 1972; FTM 3:102. *Cynosurus lagopoides* Burm.f.Fl. Ind. 29. 1768. *Coelachyrum lagopoides* (Burm.f.) Senaratna, Grass. Ceylon 79. 1956; Bor 488. *Eleusine lagopoides* (Burm.f.) Merr.Philipp.J.Sci. 19:339. 1921; FPM 1273.

Perennial herbs; culms up to 15 cm long, creeping below. Leaf blades 1-2.5 x 0.2-0.3 cm, oblong-lanceate. Spikelets 4-6 mm long, elliptic-ovate, secund; glumes 3.5-4 mm long, aristate at apex. Grains subtrigonus.

A weed of moist places; rare. Fl. & Fr.: September-March.

Coix L.

Coix lacryma-jobi L.Sp.Pl. 972. 1753; FBI 7:100; Rang. & Tad. 141; FPM 1182; Bor 264.

Annual or biennial herbs; culms upto 1.5 m tall. Leaf blade 10-30 x 0.5-2 cm, linear. Raceme of one basal female spikelet within a globose basal bract; male spikelets 2-3-nate, exerted from the globose basal bract; glumes c. 11 mm long. Grains subglobose.

A weed of rice fields; rare. Fl. & Fr.: November-February.

Cymbopogon Spreng.

Cymbopogon travancorensis Bor in J.Bombay Nat.Hist.Soc. 52:174. 1954; Bor 132. *C. flexuosus* auct. non (Nees ex Steud.) Wats. 1882; FPM 1216 p.p.

Perennial herbs; culms up to 1.2 m tall. Leaf blades 8-30 x 0.2-0.4 cm, linear-oblong. Spikelets binate; sessile spikelet dorsally compressed, lower floret empty and upper bisexual; lower glume 2-keeled; upper glume 1-keeled. Grains oblong.

A weed of open grounds near scrub jungles and bunds of lakes; rare. Fl. & Fr.: throughout the year.

Cynodon Rich. ex Pers. (nom.cons.)

Cynodon dactylon (L.) Pers. Syn.Pl. 1:85. 1805; FBI 7:288; Rang. & Tad. 250; FPM 1270; Bor 469. *Panicum dactylon* L.Sp.Pl.58. 1753.

Perennial herbs; culms up to 25 cm tall. Leaf blades 2-10 x 0.1-0.3 cm, linear-oblong. Spikes 3-5; spikelets 1.5-2.5 mm long. 1-flowered; glumes 1-2 mm long. Grains c. 1.5 mm long.

A weed of moist and dry places; also cultivated in lawns; common. Fl. & Fr.: throughout the year.

Tamil: Arugampul.

Dactyloctenium Willd.

Dactyloctenium aegyptium (L.) Beauv. Ess. Agrost. Expl. Pl. 15.1812; FPM 1273; Bor 459. *Cynosurus aegyptius* L. Sp. Pl. 72. 1753. *Eleusine aegyptia* (L.) Desf. Fl. Atlant. 1:85. 1798; FBI 7:295; Rang. & Tad. 276.

Annual herbs; culms up to 35 cm tall. Leaf blades 5-20 x 0.3-0.8 cm, linear-lanceate. Spikes 2-6; spikelets c. 3.5 mm long, 2-3-flowered; glumes 1-nerved. Grains globose.

A weed of moist and dry places; common. Fl. & Fr.: throughout the year.

Dendrocalamus Nees

Dendrocalamus strictus (Roxb.) Nees in Linnaea 9:476. 1835; FBI 7:404; Gamble in Ann. Roy. Bot. Gard. (Calcutta) 7:78. tt. 68 & 69. 1896; FPM 1286. *Bambusa stricta* Roxb. Pl. Cor. t. 80. 1798.

Trees, culms up to 12 m tall, 3-8 cm in diameter, solid or thinly-fistular. Leaf blades 2-5 x 0.4-3 cm, linear-lanceate. Inflorescence a panicle of dense globose heads; spikelets 7-12 x 2-5 mm; bracts and glumes ovate, spine-tipped. Grains ovoid.

In jungles, sometimes cultivated; rare. Fl. & Fr.: December-April.

Dichanthium Willem

Dichanthium annulatum (Forssk.) Stapf in Prain, Fl. Trop. Afr. 9:178. 1917; FPM 1206; Bor 133. *Andropogon annulatus* Forssk. Fl. Aegypt.-Arab. 173. 1775; FBI 7:196; Rang. & Tad. 204.

Annual herbs; culms up to 80 cm tall. Leaf blades 8-20 x 0.2-0.4 cm, linear. Racemes 2-5; sessile spikelets up to 4 mm long; glumes 2.5-3 mm long. Grains oblong.

A weed of moist places; rare. Fl. & Fr.: September-February.

Digitaria Heist. ex Fabricius

Digitaria ciliaris (Retz.) Koeler, Descr. Gram. 27. 1802; Veldk. in Blumea 21:32. 1973. *Panicum ciliare* Retz. Obs. Bot. 4:16. 1786. *Digitaria adscendens* (Kunth) Henr. in Blumea 1:92. 1934; Bor 298. *Panicum adscendens* Kunth, Nov. Gen. Pl. 1:97. 1816. *Digitaria marginata* Link, Enum. Hort. Berol. 1:102. 1821; FPM 1222. *D. sanguinalis* (Link) Scop. var. *extensum* Rang. & Tad. Handb. S. Indian Grass. 56. ff. 74 & 75. 1921.

Perennial herbs; culms up to 70 cm tall. Leaf blades 3-15 x 0.3-0.7 cm, linear-lanceate. Racemes 2-6; rachis winged; spikelets paired, one sessile, the other pedicelled, abaxial on rachis. Grains ellipsoid.

A weed of moist places; fairly common. Fl. & Fr.: November-March.

Echinochloa Beauv.

Echinochloa colona (L.) Link, Hort.Berol. 2:209. 1833; FPM 1230; Bor 308; Lazarides, Trop. Grass. S.E.Asia 119. 1980. *Panicum colonum* L.Syst. Nat.ed. 10. 870. 1759; FBI 7:32; Rang. & Tad. 80.

Annual herbs; culms up to 80 cm tall. Leaf blades 6-15 x 0.4-0.6 cm, linear-lanceate. Inflorescence up to 10 cm long; spikes 1-3 cm long, appressed to rachis; spikelets ovoid-ellipsoid; glumes 5-nerved; lodicules 2; stamens 3. Grains ellipsoid.

A weed of moist places; fairly common. Fl. & Fr.: September-April.

Eleusine Gaertn.

Grains globose; paleas winged on keels	.. .. .	<i>E. coracana</i>
Grains oblong; paleas not winged on keels	.. .. .	<i>E. indica</i>

Eleusine coracana (L.) Gaertn. Fruct. 1:8.t.1.f.11. 1788; FBI 7:294; FPM 1273; Bor 492. *Cynosurus coracanus* L.Syst. Nat.ed. 10. 875. 1759.

Annual herbs; culms up to 80 cm tall. Leaf blades 10-30 x 0.5-1 cm, linear. Spikes 4-7; spikelets 3-5-flowered; glumes lanceate, persistent. Grains globose.

Commonly cultivated in fields. Fl. & Fr.: December-April.

Grains form the staple food for the poor. Tamil : Kaezh varahu, Raagi.

Eleusine indica (L.) Gaertn. Fruct. 1:8. 1788; FBI 7:293; Rang. & Tad. 273; FPM 1273; Bor 493. *Cynosurus indicus* L. Sp.Pl.72. 1753.

Annual herbs; culms up to 50 cm tall. Leaf blades 8-20 x 0.3-0.8 cm, linear. Spikes 2-7 subdigitate; spikelets 4-10 mm long, 3-8-flowered; glumes lanceate. Grains oblong.

A weed along bunds of rice fields; fairly common. Fl. & Fr.: throughout the year

Eragrostiella Bor

Eragrostiella bifaria (Vahl) Bor in Indian Forester 66:270. 1940. *Poa bifaria* Vahl, Symb. Bot., 2:19. 1791. *Eragrostis bifaria* (Vahl) Wight ex Steud. Nom.Bot.ed. 2. 1:562. 1840; FBI 7:325; Rang. & Tad. 307; FPM 1265.

Perennial herbs. culms up to 60 cm tall. Leaf blades 5-20 x 0.1-0.2 cm, linear-filiform. Racemes up to 20 cm long; spikelets many-flowered; glumes lanceate. Grains ellipsoid.

A weed of open grounds near scrub jungles; rare. Fl. & Fr.: December-February.

Eragrostis Beauv.

- | | | |
|--|---------|----------------------|
| 1. Spikelets breaking up from below upwards: | | |
| 2. Spikelets 2 mm or more wide | .. .. . | <i>E. unioloides</i> |
| 2. Spikelets 1 mm or less wide | .. .. . | <i>E. pilosa</i> |
| 1. Spikelets breaking up from above downwards: | | |
| 3. Panicles compact and dense | .. .. . | <i>E. riparia</i> |
| 3. Panicles effuse: | | |
| 4. Culms viscous | .. .. . | <i>E. viscosa</i> |
| 4. Culms not viscous | .. .. . | <i>E. tenella</i> |

Eragrostis pilosa (L.) Beauv. Ess. Agrost. 71:162. & 175. 1812; FBI 7:323; Rang. & Tad. 305; FPM 1265; Bor 512. *Poa pilosa* L. Sp. Pl. 68. 1753.

Annual herbs; culms up to 60 cm tall. Leaf blades 5-15 x 0.2-0.4 cm, infolded. Panicles up to 25 x 10 cm; lower branches whorled and upper ones alternate; spikelets 4-8 mm long; lower glume linear; upper glume 1-nerved. Grains ellipsoid.

A weed of roadsides and other open places; fairly common. Fl. & Fr.: September-March.

Eragrostis riparia (Willd.) Nees in Mart. Fl. Bras. Enum. Pl. 2(1):512. 1829; FPM 1263; Bor 513. *Poa riparia* Willd. in Ges. Naturf. Freunde Berlin Neue Schriften 4:185. 1803.

Annual herbs; culms up to 40 cm tall. Leaf blades 2-8 x 0.1-0.2 cm, inrolled. Panicles up to 5 x 1.5 cm, contracted; spikelets 8-10-flowered; lower glume c. 0.5 mm long; upper glume c. 1 mm long. Grains linear.

A weed of roadsides and waste places; common. Fl. & Fr.: throughout the year.

Eragrostis tenella (L.) Beauv. ex Roem. & Schult. Syst. Veg. 2:576. 1817; FBI 7:315. *Poa tenella* L. Sp. Pl. 69. 1753. *Eragrostis plumosa* (Retz.) Link, Hort. Berol. 1:192. 1827; FPM 1264. *Poa plumosa* Retz. Obs. Bot. 4:20. 1786.

Annual herbs; culms up to 50 cm tall. Leaf blades 3-8 x 0.2-0.5 cm, linear-lanceate. Panicles up to 8 x 1.5 cm; spikelets c. 8-flowered; glumes 0.6-1 mm long. Grains globose.

A weed of roadsides and waste places; fairly common. Fl. & Fr.: throughout the year.

Eragrostis unioloides (Retz.) Nees ex Steud. Syn. Pl. Glum. 1:264. 1854; FPM 1264; Bor 515. *Poa unioloides* Retz. Obs. Bot. 5:19. 1788. *Eragrostis amabilis* auct. non L. 1753; FBI 7:317; Rang. & Tad. 295.

Annual herbs; culms up to 30 cm tall. Leaf blades 5-15 x 0.2-0.3 cm, convolute. Panicles up to 20 x 6 cm; spikelets 4-10 mm long; glumes 1-nerved. Grains ellipsoid.

A weed of moist places; rare. Fl. & Fr.: December-March.

Eragrostis viscosa (Retz.) Trin. Mem. Acad. Sci. Petersb. ser. 6.1:397. 1830; FPM 1264; Bor 515. *Poa viscosa* Retz. Obs. Bot. 4:20. 1786.

Annual herbs; culms up to 10 cm tall. Leaf blades 1.5-8 x 0.1-0.3 cm, inrolled. Panicles up to 5 x 1.5 cm, glandular; spikelets 8-10-flowered; glumes c. 0.6 mm long. Grains ovoid.

A weed of waste places and roadsides; fairly common. Fl. & Fr.: December-June.

Eremochloa Buse

Eremochloa muricata (Retz.) Hack. in DC. Monogr. Phan. 6:262. 1889; FBI 7:140; Rang. & Tad. 163; FPM 1196; Bor 146. *Aegilops muricata* Retz. Obs.Bot. 2:27. 1781.

Perennial herbs; culms up to 40 cm tall. Leaf blades 5-15 x 0.2-0.5 cm, linear. Racemes up to 15 cm long; sessile spikelets up to 4.5 mm long; glumes oblong-obovate. Grains ovoid.

A weed of waste places near scrub jungles; rare. Fl. & Fr.: December-March.

Eriochloa Kunth

Eriochloa procera (Retz.) Hubb. in Kew Bull. 1930:256. 1930; FPM 1224; Bor 312. *Agrostis procera* Retz. Obs. Bot. 4:19. 1786.

Perennial herbs; culms up to 90 cm tall. Leaf blades 5-20 x 0.3-0.6 cm, linear-lanceate. Panicles up to 20 cm long; spikelets paired, rarely solitary, 3-3.5 mm long; upper glume c. 3 mm long, 5-nerved. Grains ellipsoid.

A weed of roadsides near scrub jungles, also along bunds of rice fields; fairly common. Fl. & Fr.: October-March.

Heteropogon Pers.

Heteropogon contortus (L.) Beauv. ex Roem. & Schult. Syst. Veg. 2:836. 1817; FPM 1208; Bor 163. *Andropogon contortus* L.Sp.Pl. 1045. 1753; FBI 7:199; Rang. & Tad. 207.

Annual herbs; culms up to 90 cm tall. Leaf blades 5-20 x 0.2-0.5 cm, linear-lanceate. Racemes up to 8 cm long; lower 4-6 pairs of spikelets unawned; upper pairs of spikelets awned; glumes 6-7 mm long; awn 6-8 cm long. Grains oblong.

A weed of roadsides and waste places; very common. Fl. & Fr.: August-March. Tamil: Oosippullu.

Imperata Cyr.

Imperata cylindrica (L.) Raeusch. var. **major** (Nees) Hubb. ex Hubb. & Vaughan, Grass. Maur. 96. 1940; Bor 170. *I. koenigii* (Retz.) Dur. et Schinz. var. *major* Nees, Fl. Afr.Austr. 90. 1841. *I. cylindrica* (L.) Raeusch. var. *koenigii* (Retz.) Dur. & Schinz, Consp. Flor.Afr. 5:694. 1894; FPM 1184. *Saccharum koenigii* Retz. Obs. Bot. 5:16. 1789.

Perennial herbs; culms up to 50 cm tall. Leaf blades 5-12 x 0.2-0.4 cm, linear-lanceate. Panicles subcylindric; spikelets enveloped by hairs; glumes c. 4 mm long. Grains oblong.

A weed along bunds of rice fields and other moist places; rare. Fl. & Fr.: December-April.

Ischaemum L.

Ischaemum indicum (Houtt.) Merr. in J. Arnold Arbor. 19:320. 1938; Bor 180. *Phleum indicum* Houtt. Nat. Hist. 13:198. t. 90. f. 2. 1782. *Ischaemum ciliare* Retz. Obs. Bot. 6:36. 1791; FBI 7:133; Rang. & Tad. 159. *I. aristatum* auct. non L. 1753; FPM 1193.

Annual herbs; culms up to 40 cm tall. Leaf blades 1.5-4.5 x 0.2-0.4 cm, linear-lanceate. Racemes 2-3; sessile spikelets awned; pedicelled spikelets aristate; glumes many-nerved. Grains oblong.

A weed along bunds of rice fields and other moist places; fairly common. Fl. & Fr.: September-March.

Iseilema Anders.

Iseilema laxum Hack. in DC. Monogr. Phan. 6:682. 1889; FBI 7:218; Rang. & Tad. 216; FPM 1211; Bor 188.

Annual herbs; culms up to 30 cm tall. Leaf blades 3-10 x 0.3-0.5 cm, lanceate. Panicles interrupted; involucre spikelets c. 4 mm long; pedicelled spikelets narrower; hermaphrodite spikelets awned. Grains oblong.

A weed of moist and marshy places; rare. Fl. & Fr.: September-February.

Leptochloa Beauv.

Leptochloa chinensis (L.) Nees, Syll. Pl. Nov. 1:4. 1824; FBI 7:299; Rang. & Tad. 282; FPM 1260; Bor 516. *Poa chinensis* L. Sp. Pl. 69. 1753.

Annual herbs; culms up to 80 cm tall. Leaf blades 8-20 x 0.2-0.4 cm, linear. Panicles up to 30 cm long; spikelets 3-7-flowered; glumes 1-nerved. Grains obovoid.

A weed of rice fields and marshy places; rare. Fl. & Fr.: November-March.

Melanocenchris Nees

Melanocenchris monoica (Rottl.) Fischer in Gamble & Fischer, Fl. Pres. Madras 1831. 1934 & 1268. 1957 (repr. ed.); Bor 473. *Pomereulla monoica* Rottl. Ges. Naturf. Freunde Berlin Neue Schriften 4:218. 1803.

Annual herbs; culms up to 20 cm tall. Leaf blades 0.7-2.5 x 0.1-0.3 cm, lanceate-linear. Racemes up to 4 cm long; spikelets in turbinate heads; fertile spikelets 2; glumes c. 4 mm long. Grains oblong.

A weed of open places near scrub jungles; rare. Fl. & Fr.: December-March.

Microchloa R.Br.

Microchloa indica (L.f.) Beauv. Ess. Agrost. Explic. Planch. 20.1812; FPM 1267; Bor 473. *Nardus indica* L.f. Suppl. Pl. 105. 1781. *Microchloa setacea* (Roxb.) R.Br. Prodr. 208. 1810; FBI 7:283. *Rottboellia setacea* Roxb. Pl. Cor. t. 132. 1798.

Annual herbs; culms up to 10 cm tall. Leaf blades 1-2.5 x 0.08-0.12 cm, linear-filiform. Spikes up to 8 cm long; spikelets oblong-lanceate; glumes 1-nerved. Grains oblong.

Mnesithea Kunth

Mnesithea laevis (Retz.) Kunth, Rev. Gram. 1:154. 1829; FPM 1220; Bor 197. *Rottboellia laevis* Retz. Obs. Bot. 3:11. 1783. *R. perforata* Roxb. Pl. Cor. t. 182. 1805; FBI 7:158.

Perennial herbs; culms up to 1.2 m tall. Leaf blades 10-40 x 0.3-0.6 cm, linear. Racemes solitary; rachis with 2 sessile spikelets sunk at each node. Grains oblong.

A weed of moist places near lakes and rice fields; rare. Fl. & Fr.: November-March.

Ophiurus Gaertn.

Ophiurus exaltatus (L.) Kuntze, Rev. Gen. Pl. 2:780. 1891; FPM 1218; Bor 199. *Aegilops exaltata* L. Mant. Pl. 575. 1771. *Ophiurus corymbosus* Gaertn. f. Fruct. 3:4. t. 181. 1805; FBI 7:160.

Perennial herbs; culms up to 1.8 m tall. Leaf blades 7-15 x 0.5-0.8 cm, linear-lanceate, glabrous. Spikes 3-6 together, each 5-10 cm long; spikelets 2.5-2.7 mm long; glumes 2.2-2.5 mm long. Grains oblong.

A weed along bunds of rice fields, often forming thickets; rare. Fl. & Fr.: November-April.

Oryza L.

Oryza sativa L. Sp. Pl. 33. 1753; FBI 7:92; FPM 1276; Bor 605.

Annual herbs; culms up to 1.2 m tall. Leaf blades 20-50 x 0.4-1 cm, linear. Inflorescence paniced; spikelets laterally compressed, 1-flowered; glumes 0.25-0.35 mm long; lemma 6-8 mm long, coriaceous. Grains oblong.

Cultivated in fields; very common. Fl. & Fr.: September-March.

Grains form the chief staple food. Tamil: Nel, Arisi. English: Rice, Paddy.

Panicum L.

- | | | |
|---|---------|-----------------------|
| 1. Lemma of upper floret transversely rugose | .. .. . | <i>P. maximum</i> |
| 1. Lemma of upper floret smooth: | | |
| 2. Lower glume cuspidate-acuminate; spikelets gaping widely at anthesis | .. .. . | <i>P. trypheron</i> |
| 2. Lower glume not cuspidate-acuminate; spikelets not gaping at anthesis: | | |
| 3. Lower floret paleate | .. .. . | <i>P. psilopodium</i> |
| 3. Lower floret epaleate | .. .. . | <i>P. notatum</i> |

Panicum maximum Jacq. in Collectanea 1:76. 1787; FBI 7:49; FPM 1235; Bor 327.

Perennial herbs; culms up to 2 m long. Leaf blades 30-50 x 1-1.5 cm, linear. Panicles up to 30 cm long; lowermost branches whorled; spikelets 3-3.5 mm long; lower glume 3-nerved; upper glume 5-7-nerved. Grains obovoid.

Cultivated in fields as fodder grass, also runs wild; fairly common. Fl. & Fr.: December-April.

Panicum notatum Retz. Obs.Bot. 4:18. 1786; Bor 701. *P. montanum* Roxb. Fl. Ind. 1:315. 1820; FBI 7:53; FPM 1235; Bor 239.

Perennial herbs; culms up to 1 m tall. Leaf blades 4-12 x 0.5-1.5 cm, lanceate-linear. Panicles up to 20 cm long; branches alternate; spikelets c. 2.6 mm long; glumes as long as spikelets. Grains ellipsoid.

Panicum psilopodium Trin. Gram. Panic. 217. 1826; FBI 7:46; FPM 1234; Bor 329.

Annual herbs; culms up to 50 cm tall. Leaf blades 5-20 x 0.4-1.2 cm, linear-lanceate. Panicles up to 15 cm long; branches alternate; spikelets 3-3.5 mm long; lower glume 3-5-nerved; upper glume 13-15-nerved. Grains ellipsoid.

A weed along bunds of rice fields and other moist places; rare. Fl. & Fr.: December-March.

Panicum trypheron Schult. Syst. Veg. 2:244. 1824; FBI 7:47; Rang. & Tad. 96; FPM 1235; Bor 331.

Annual herbs; culms up to 70 cm tall. Leaf blades 5-20 x 0.3-0.7 cm, linear-lanceate. Panicles up to 20 cm long; branches alternate; spikelets 3-3.5 mm long; glumes 5-or 7-nerved. Grains oblong.

A weed of roadsides and moist places; fairly common. Fl. & Fr.: September-February.

Paspalidium Stapf

Racemes shorter than internodes

.. .. . *P. flavidum*

Racemes longer than internodes

.. .. . *P. geminatum*

Paspalidium flavidum (Retz.) Camus in Lecomte, Fl. Indo-Chine 7:419. 1922; Bor 333. *Panicum flavidum* Retz. Obs. Bot. 4:15. 1786; FBI 7:28; Rang. & Tad. 69.

Annual herbs; culms up to 50 cm tall. Leaf blades 5-20 x 0.3-1 cm, linear-lanceate. Racemes 5-10, each 1-2.5 cm long; spikelets 2.5-3 mm long; lower glume ovate-oblong; upper glume ovate. Grains ovoid.

A weed of roadsides and waste places; fairly common. Fl. & Fr.: September-January.

Paspalidium geminatum (Forssk.) Stapf in Prain, Fl. Trop. Afr. 9:583. 1920; FPM 1229; Bor 333. *Panicum geminatum* Forssk. Fl. Aegypt-Arab. 18.1775. *P. paspaloides* Pers. Syn. Pl. 1:81. 1805; FBI 7:30. *P. fluitans* Retz. Obs. Bot. 3:8. 1783; Rang. & Tad. 72.

Perennial herbs; culms up to 80 cm tall. Leaf blades 5-20 x 0.4-0.8 cm, linear-lanceate. Racemes 0.7-1.8 cm long; spikelets 2.5-3 mm long; lower glume ovate; upper glume ovate-oblong. Grains ellipsoid.

A weed of ditches and marshy places; rare. Fl. & Fr.: November-February.

Paspalum L.

Paspalum scrobiculatum L. Mant. P1. 29.1767; FBI 7:10; Rang. & Tad. 49; FPM 1227; Bor 340

Annual herbs; culms up to 60 cm tall. Leaf blades 4-20 x 0.2-0.6 cm, linear-lanceate. Racemes 2-6 cm long; rachis flattened; spikelets 2.5-3 mm long; upper glume ovate-orbicular. Grains ellipsoid.

A weed of rice fields and other marshy places; rare. Fl. & Fr.: November-February.

Pennisetum Rich.

Perennials; bristles of spikelets over 9 mm long

.. .. . *P. purpureum*

Annuals; bristles of spikelets under 8 mm long

.. .. . *P. americanum*

Pennisetum americanum (L.) Leeke, Z. Naturwiss. 79:52. 1907; Terrell in Taxon 25:303. 1976. *Panicum americanum* L.Sp.P1. 56. 1753. *Pennisetum typhoides* (Burm.f.) Stapf & Bor 350. *Alopecurus typhoides* Burm.f.F1. Ind. 27. 1768.

Annual herbs; culms up to 2.5 m tall. Leaf blades 10-50 x 1-2.5 cm, linear-lanceate. Inflorescence up to 25 cm long, spiciform; spikelets c. 3 mm long, usually paired. Grains globose.

Cultivated in fields; rare. Fl. & Fr.: November-March.

Grains form the food for the poor people. Tamil: Kambu.

Pennisetum purpureum Schum. Beskr. Guin. P1. 44.1827; Bor 348.

Perennial herbs; culms up to 1 m tall. Leaf blades 10-30 x 0.5-1 cm, linear. Panicles up to 15 x 1.5 cm; spikelets up to 6 mm long; upper glume c. 1.5 mm long. Grains oblong.

Cultivated in fields as a fodder grass; rare. Fl. & Fr.: December-March.

Perotis Ait.

Perotis indica (L.) Kuntze, Rev.Gen.P1. 2:767. 1891; FPM 1256; Bor 611. *Anthoxanthum indicum* L.Sp.P1.28. 1753. *Perotis latifolia* Ait. Hort. Kew.1:85. 1789; FBI 7:98; Rang. & Tad. 137.

Annual herbs; culms up to 30 cm tall. Leaf blades 1-5 x 0.2-0.4 cm, ovate-lanceate. Racemes up to 15 cm long; spikelets 2-3 mm long; glumes 2-3 mm long; awns up to 1.5 cm long. Grains cylindrical.

A weed of roadsides and waste places; common. Fl. & Fr.: August-March.

Pseudoraphis Griff.

Pseudoraphis spinescens (R.Br.) Vick. Proc. Roy.Soc. Queensland 62(7):69. 1952; Bor 353. *Panicum spinescens* R.Br. Prodr. 193. 1810. *Chamaeraphis spinescens* (R.Br.) Poir. in Lam. Encycl. (Suppl.2):189. 1811; FBI 7:62; Rang. & Tad. 102. *Pseudoraphis aspera* (Koen.) Pilger, Notizbl Bot.Gart. Berlin-Dahlem 10:210. 1928; FPM 1239. *Panicum asperum* Koen. in Naturforscher 23:209. 1788 non Lam. 1778.

Perennial herbs; culms much-branched, often floating. Leaf blades 2-5 x 0.2-0.4 cm, linear-lanceate. Panicles up to 8 cm long; branches alternate, scabrid; spikelets c. 7 mm long; lower glume orbicular; upper glume lanceate. Grains cylindrical.

An aquatic weed of lakes and ponds; rare. Fl. & Fr.: November-April.

Saccharum L.

Leaf blades over 3 cm broad	.. .. .	<i>S. officinarum</i>
Leaf blades under 1 cm broad	.. .. .	<i>S. spontaneum</i>

Saccharum officinarum L. Sp.P1. 54. 1753; FBI 7:118; FPM 1185; Bor 212.

Perennial herbs; culms up to 4 m tall. Leaf blades 50-150 x 3-6 cm, linear-lanceate. Panicles up to 80 cm long; spikelets in pairs; glumes membranous. Grains ellipsoid.

Cultivated in fields; rare. Fl. & Fr.: January-April.

The canes yield sugar. Tamil: Karumbu. English: Sugarcane.

Saccharum spontaneum L. Mant. Alt. 183. 1771; FBI 7: 118; Rang. & Tad. 149; FPM 1185; Bor 214.

Perennial herbs; culms up to 2 m tall. Leaf blades 30-60 x 0.3-0.5 cm, linear. Panicles 20-40 cm long; primary branches verticillate or alternate; spikelets sessile and pedicelled, linear-lanceate; glumes lanceate. Grains cylindrical.

A weed along bunds of rice fields and canals; fairly common. Fl. & Fr.: throughout the year.

Setaria Beauv. (*nom.cons.*)

1. Bristles retrorsely barbed	.. .. .	<i>S. verticillata</i>
1. Bristles antrorsely barbed:		
2. Upper glume as long as upper lemma	.. .. .	<i>S. italica</i>
2. Upper glume shorter than upper lemma:		
3. Inflorescences spiciform:		
4. Spikelets c. 3 mm long; upper lemma coarsely rugose	.. .. .	<i>S. glauca</i>
4. Spikelets c. 2.25 mm long; upper lemma finely rugose	.. .. .	<i>S. pumila</i>
3. Inflorescences not spiciform	.. .. .	<i>S. tomentosa</i>

Setaria glauca (L.) Beauv. Ess. Agrost. 51:169 & 178. 1812; FBI 7:78; Rang. & Tad. 110; Bor 360. *Panicum glaucum* L. Sp.P1. 56. 1753.

Annual herbs; culms up to 50 cm tall. Leaf blades 4-15 x 0.4-0.7 cm, linear-lanceate. Panicles up to 6 x 1 cm; spikelets ovoid; glumes ovate. Grains ellipsoid.

A semiaquatic weed of ditches, rice fields etc.; fairly common. Fl. & Fr.: December-February.

Setaria italica (L.) Beauv. Ess. Agrost. 51:170 & 178. 1812; FBI 7:78; FPM 1239; Bor 362. *Panicum italicum* L. Sp.Pl. 56. 1753.

Annual herbs; culms up to 90 cm tall. Leaf blades 15-30 x 0.8-2 cm, linear-lanceate. Panicles up to 12 cm long; spikelets ovoid; glumes 1.8-2.2 mm long. Grains ellipsoid.

Occasionally cultivated in fields. Fl. & Fr.: January-March.

Grains used as food by poor people. Tamil: Thinai.

Setaria pumila (Poir.) Roem. & Schult. Syst. Veg. 2:891. 1817; Cope in Nasir & Ali, Fl. Pak. 143:181. 1982. *Panicum pumilum* Poir. Encycl. (Suppl.) 4:273. 1816. *Setaria pallide-fusca* (Schum.) Stapf & Hubb. in Kew Bull. 1930:259. 1930; Bor 363. *Panicum pallide-fusum* Schum. Beskr. Guin. Pl. 58. 1827.

Annual herbs; culms up to 20 cm tall. Leaf blades 2-10 x 0.2-0.4 cm, linear. Panicles up to 1.7 cm long; glumes 1.2-1.5 mm long. Grains ellipsoid.

A weed of roadsides and waste places; rare. Fl. & Fr.: September-December.

Setaria tomentosa (Roxb.) Kunth, Rev. Gram. 1:47. 1829; Bor 365. *Panicum tomentosum* Roxb. Fl. Ind. 1:303. 1820. *Setaria intermedia* (Roth) Roem. & Schult. Syst. Veg. 2:489. 1817; FBI 7:79; Rang. & Tad. 111; FPM 1239. *Panicum intermedium* Roth, Nov. Pl. Sp.47.1821 non Hornem. 1813.

Annual herbs; culms up to 80 cm tall. Leaf blades 6-15 x 0.4-1 cm, linear-lanceate. Panicles up to 10 cm long; spikelets ovoid-ellipsoid; lower glume 3-nerved; upper glume 5-7-nerved. Grains ellipsoid.

A weed of waste places; rare. Fl. & Fr.: December-March.

Setaria verticillata (L.) Beauv. Ess. Agrost. 51:178. 1812; FBI 7:80; Rang. & Tad. 113; FPM 1239; Bor 365. *Panicum verticillatum* L. Sp.Pl.ed. 2.82. 1762.

Annual herbs; culms up to 1.5 m tall. Leaf blades 5-25 x 0.4-1.6 cm, linear-lanceate. Panicles up to 12 cm long; spikelets ellipsoid; lower glume 1-1.2 mm long; upper glume 1.2-2 mm long. Grains ellipsoid.

A weed of roadsides and other waste places; fairly common. Bristles easily stick to clothes. Fl. & Fr.: September-April.

Spinifex L.

Spinifex littoreus (Burm. f.) Merr. Philipp. J. Sci. 7:229. 1912; FPM 1183; Bor 366. *Stipa littorea* Burm. f. Fl. Ind. 29. 1768. *Spinifex squarrosus* L. Mant. Alt. 300. 1771; FBI 7:63; Rang. & Tad. 104.

Perennial herbs; culms creeping on ground. Leaf blades 5-20 x 0.2-0.4 cm, rigid, scabrous. Male inflorescences 7-14 cm across; spikelets c. 1 x 0.4 cm, ovoid; glumes coriaceous. Bisexual inflorescences 20-30 cm across, stiff-bristly; bristles c. 12 cm long; spikelets c. 1 cm long. Grains clavate.

A weed of sandy seashores; rare. Fl. & Fr.: December-April. Tamil: Raavanan meesai.

Sporobolus R.Br.

Panicles effuse at maturity	.. .. .	<i>S. indicus</i> var. <i>diander</i>
Panicles contracted at maturity	.. .. .	<i>S. indicus</i> var. <i>fertilis</i>

Sporobolus indicus (L.) R.Br. var. **diander** (Retz.) Jov. & Goed. in Bull. Centre Et. Rech.Sc. Biarritz 7:65: 1968 et in Taxon 22:163. 1973. *Agrostis diander* Retz. Obs. Bot. 5:19. 1789. *Sporobolus diander* (Retz.) Beauv. Ess. Agrost. 26:147 & 178. 1812; FBI 7:247; Rang. & Tad. 231; FPM 1258; Bor 629.

Perennial herbs; culms up to 60 cm tall. Leaf blades 8-30 x 0.2-0.4 cm, linear. Panicles up to 40 cm long; branches alternate; spikelets obovoid. Grains cylindrical.

A weed of roadsides and open places; fairly common. Fl. & Fr. : September-December.

Sporobolus indicus (L.) R.Br. var. **fertilis** (Steud.) Jov. & Goed. in Bull. Centre Et. Rech.Sc. Biarritz 7:50. 1968 et in Taxon 22:163. 1973. *Sporobolus indicus* auct.non (L.) R.Br. 1810; FBI 7:247 p.p.; FPM 1258; Bor 630.

Perennial herbs; culms up to 60 cm tall, tufted. Leaf blades 8-30 x 0.2-0.4 cm, linear. Panicles up to 40 cm long; branches alternate; spikelets obovoid. Grains obovoid.

A weed of ditches and along margins of ponds and lakes; rare. Fl. & Fr.: December - April.

Trachys Pers.

Trachys muricata (L.) Pers. ex Trin. in Mem. Acad. Sci. Petersb. ser. 6.3:189. 1834; FPM 1255; Bor 369. *Cenchrus muricatus* L. Mant. Alt. 302. 1771. *Trachys mucronata* Pers. Syn. Pl. 1:85. 1805; FBI 7:96; Rang. & Tad. 129.

Annual herbs. culms up to 39 cm long. Leaf blades 1.5-3.5 x 0.3-0.6 cm, lanceate. Racemes up to 5 cm long. paired; spikelets c. 6 in a cluster, sunk in flat joint; glumes lanceate. Grains ovoid.

A weed along sandy seashores; fairly common. Fl. & Fr.: September - February.

Tragus Hall. (nom.cons.)

Tragus roxburghii Panigr. in Kew Bull. 19:495. 1974; Cope in Nasir & Ali, Fl. Pak. 143:150. 1982. *T. biflorus* auct. non Scop. 1777; FBI 7:97; Rang. & Tad. 133.

Annual herbs; culms up to 20 cm tall. Leaf blades 1-3.5 x 0.2-0.5 cm, lanceate-linear; spikelets paired, sessile; lower glume reduced; upper glume 4-4.5 mm long. Grains linear.

A weed of roadsides and open places; rare. Fl. & Fr: September-March.

Vetiveria Lem.-Lisanc.

Vetiveria zizanioides (L.) Nash in Small, Fl.S.E.U.S. 67. 1903; FPM 1201; Bor 258. *Phalaris zizanioides* L. Mant. Alt. 183. 1771. *Andropogon squarrosus* auct. non L. f. 1781; FBI 7:186; Rang. & Tad. 1993.

Perennial herbs; culms up to 1.5 m tall. Leaf blades 10-20 x 0.2-0.5 cm, linear-lanceate. Panicles somewhat contracted; racemes up to 15 cm long, whorled; spikelets in pairs. Grains oblong.

A weed along low-lying places and margins of lakes; fairly common. Fl. & Fr.: December-April.

Zea L.

Zea mays L. Sp.Pl. 971. 1753; FBI 7:102; FPM 1181; Bor 270.

Annual herbs; culms up to 2.5 m tall. Leaf blades 50-100 x 4-8 cm, lanceate-linear. Male inflorescence a terminal panicle; male spikelets 6-9 mm long; female inflorescences axillary, with primary and secondary axes fused into a spongy core; Grains subglobose.

Cultivated in fields; fairly common. Fl. & Fr.: January-March.

Zoysia Willd.

Zoysia matrella (L.) Merr. Philipp. J.Sci 7:230. 1912; FPM 1257; Bor 684. *Agrostis matrella* L. Mant. Alt. 185. 1771.

Perennial herbs; culms up to 10 cm tall. Leaf blades 1-2.5 x 0.1-0.2 cm, linear. Racemes up to 2.5 cm long, spiciform; spikelets ovoid; upper glume ovate-lanceate. Grains oblong-ovoid.

Cultivated as a lawn grass; fairly common. Fl. & Fr.: December-March.

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